

55.06(12.7A)

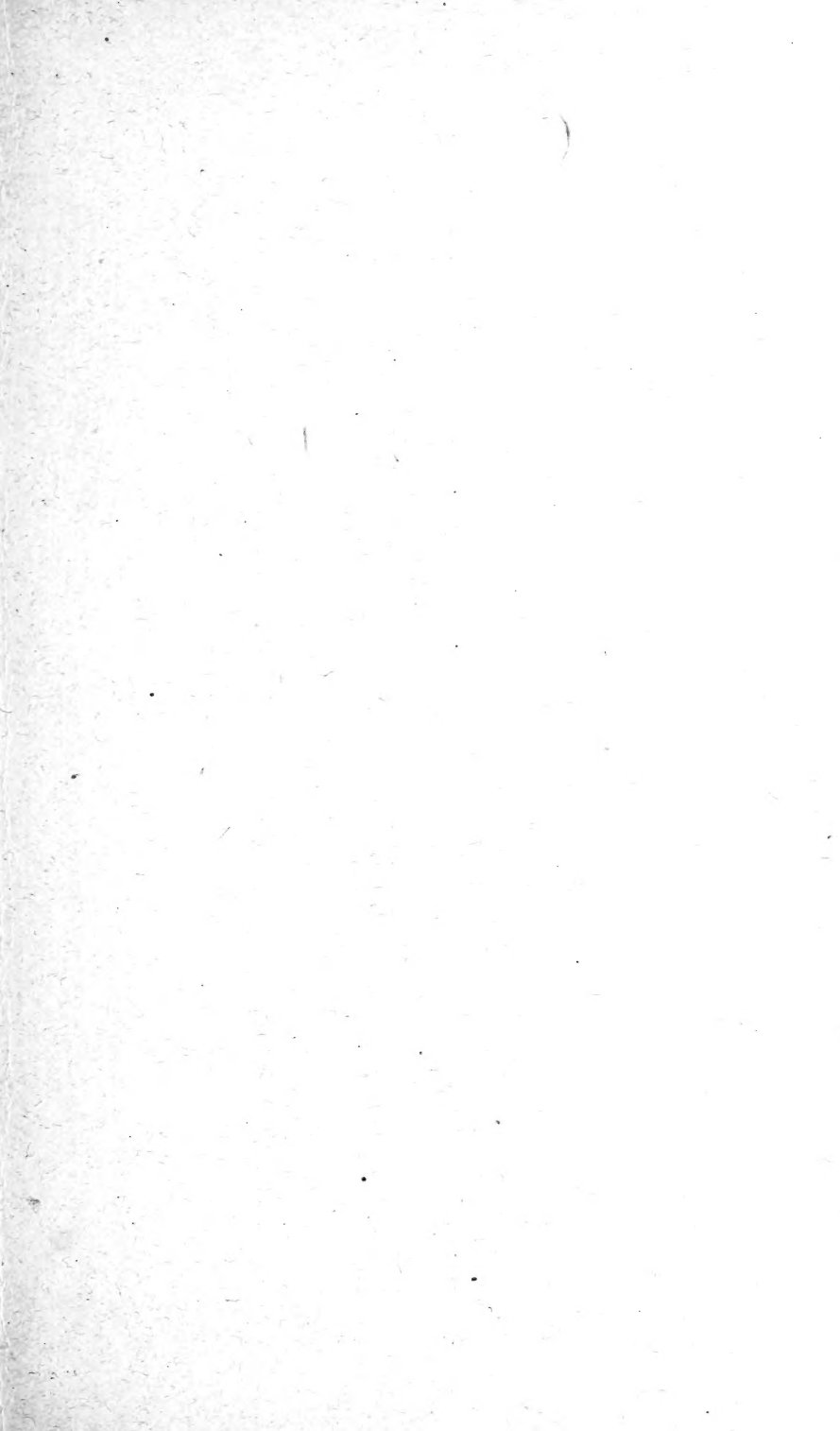
<sup>c</sup>  
R/4

FOR THE PEOPLE  
FOR EDUCATION  
FOR SCIENCE

LIBRARY  
OF  
THE AMERICAN MUSEUM  
OF  
NATURAL HISTORY





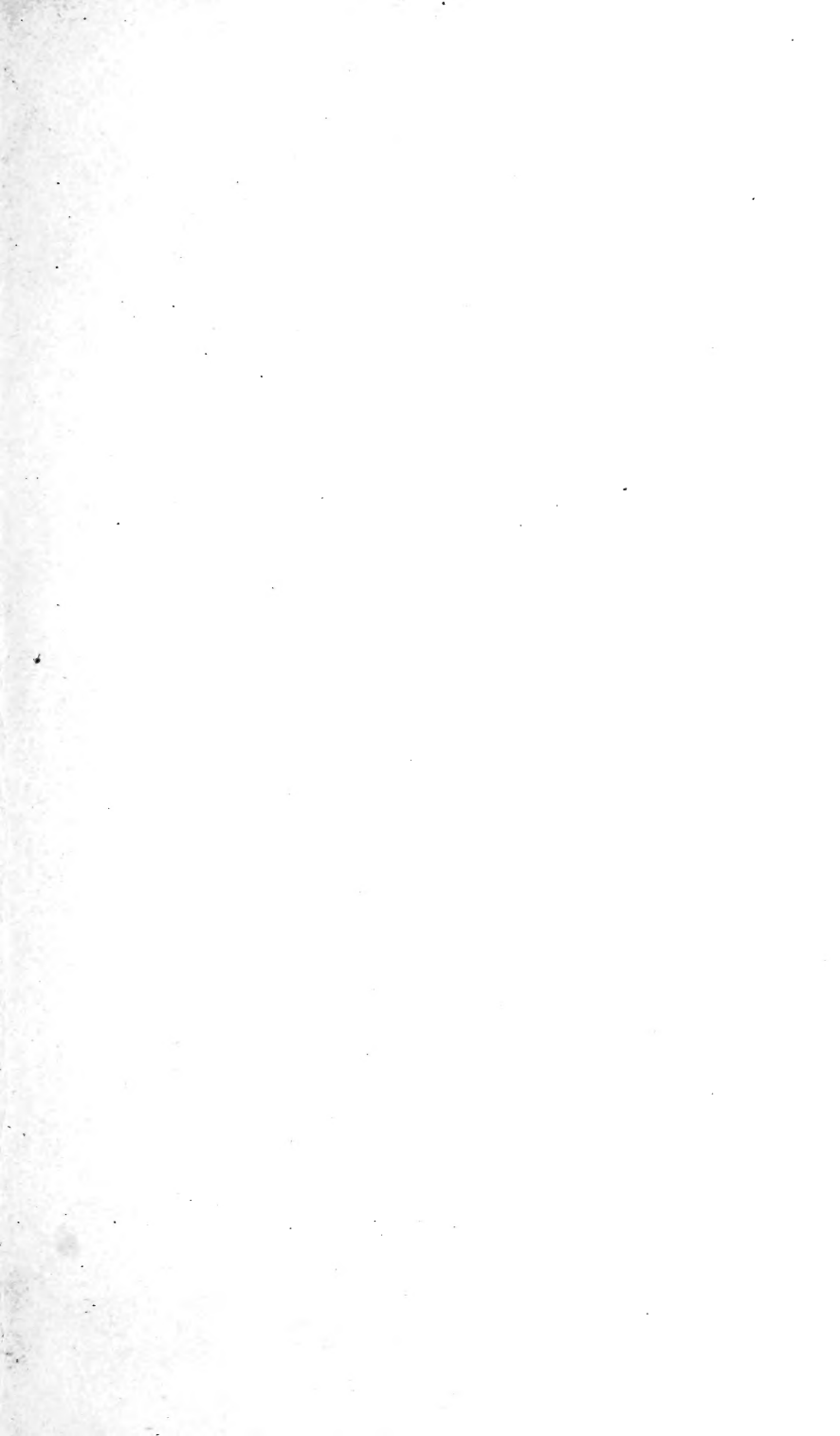














BIBLIOGRAPHY  
OF  
YORKSHIRE GEOLOGY





*called O.P.  
7/30/31 gm*

PROCEEDINGS OF THE YORKSHIRE GEOLOGICAL SOCIETY  
VOL. XVIII.

BIBLIOGRAPHY  
OF  
YORKSHIRE GEOLOGY

55.06 (42.74)

C.  
P.H.

(C. FOX-STRAWWAYS' MEMORIAL VOLUME)

x 55.091 (42.74)

BY

T. SHEPPARD

M.Sc., F.G.S., F.R.G.S., F.S.A. (SCOT.)

THE MUSEUMS, HULL

eg

A. BROWN & SONS, LIMITED  
LONDON, HULL AND YORK

1915

16-70936-July 26

## PREFACE

THIS Bibliography is based upon an incomplete manuscript for the years 1534-1892, by the late C. Fox-Strangways, F.G.S. This has been checked and considerably amplified. In connection with the old books dealing with Spas, etc., Fox-Strangways spent a considerable time at the British Museum, and, as a result, few additions have had to be made to that section of his work. For the entries for the years 1893-1914 (from page 254 to the end) I am responsible.

The completion of this Bibliography in the comparatively short time of five years has been rendered possible by the fact that I have in my possession complete sets of most of the geological and natural history publications which contain papers on Yorkshire. I have also had access to many rare books, pamphlets and maps, and have paid many visits to the libraries in London and elsewhere, especially with regard to the earlier publications. To all those who have so willingly helped, I am very grateful ; especially to Mr. George Barrow, of H.M. Geological Survey, for his pains in completing and amplifying the information Fox-Strangways had prepared in reference to the maps of the Geological Survey (pages 477-502).

T. S.





# CONTENTS

	PAGE
LIST OF SCIENTIFIC PUBLICATIONS QUOTED . . .	ix
INTRODUCTION . . . . .	xxix
BIBLIOGRAPHY OF YORKSHIRE GEOLOGY . . .	I
MAPS AND SECTIONS OF THE GEOLOGICAL SURVEY . .	477
INDEX . . . . .	503



# LIST OF SCIENTIFIC PUBLICATIONS QUOTED

THE following list does not represent all the publications consulted, as many were referred to which did not yield information of service in connection with the Bibliography. Those mentioned in the following list therefore are actually quoted.

- Abstracts of Proceedings of the Geological Society.*
- Acad. Sci. Bull., Bruxelles.*
- Académie Roy. Belg., Bull.*
- Académie Sci. Paris, Comptes Rendus.*
- Akademie Wissensch. Berlin. Sitz. k-preuss.*
- Alpine Fr. Club, Ann. du.*
- Alpine Journal.*
- Amateur Scientific Society, Proceedings.*
- American Association for the Advancement of Science, Proceedings.*
- American Journal of Science.*
- American Philosophical Society, Transactions.*
- Analyst.*
- Animal World.*
- Annal. Chem. Pharm., Liebig.*
- Annales Chim.*
- Annales des Mines, Paris.*
- Annales du Alpine Fr. Club.*
- Annales Sci. Nat. Bot.*
- Annales Soc. Geol. Nord.*
- Annals and Magazine of Natural History.*
- Annals of Botany.*
- Annals of British Geology.*
- Annals of Philosophy.*
- Annals, South African Museum.*
- Annual Report and Proceedings, Belfast Naturalists' Field Club.*
- Annual Report and Transactions, Manchester Microscopical Society.*
- Annual Report, Malton Naturalists' Society.*

- Annual Report, Scarborough Philosophical and Archæological Society.*  
*Annual Report, Smithsonian Institution.*  
*Annual Reports, Geological Survey.*  
*Annual Reports, Huddersfield Natural History and Photographic Society.*  
*Annual Reports, Hull Literary and Philosophical Society.*  
*Annual Reports, North Staffordshire Field Club.*  
*Annual Reports, Whitby Literary and Philosophical Society.*  
*Annual Reports, Yorkshire Philosophical Society.*  
*Anthropological Institute, Journal.*  
*Antiquary.*  
*Archæologia.*  
*Archæological and Topographical Journal, Yorkshire.*  
*Archæological Journal.*  
*Archives Phys. Path. Chem.*  
*Ashmolean Natural History Society of Oxfordshire, Proceedings and Report.*  
*Ashmolean Society, Proceedings.*  
*Associated Architectural Societies' Journal.*  
*Associated Architectural Societies' Reports.*

## B.

- Bankfield Museum Notes (Halifax).*  
*Barnsley Naturalists' Society, Quarterly Transactions.*  
*Bath Natural History and Antiquarian Field Club, Proceedings.*  
*Belfast Naturalists' Field Club, Annual Report and Proceedings.*  
*Belgique, Bull. Soc. Geol.*  
*Belgique, Mem. du Musée Royal d' Hist. nat. de.*  
*Berg-, hütt. Zeit.*  
*Beverly Corporation Minutes.*  
*Birmingham Natural History and Philosophical Society, Journal.*  
*Birmingham Philosophical Society, Proceedings.*  
*Botanical Gazette.*  
*Botanisches Jahrb. (Engler's.)*  
*Botany, Annals of.*  
*Botany, Journal of.*  
*Bradford Antiquary.*  
*Bradford Natural History and Microscopical Society.*



*Bradford Review.*  
*Bradford Scientific Journal.*  
*Brewing, Journal of Federated Institute of.*  
*Bridgewater Treatises.*  
*Brighton Natural History Society, Report.*  
*Bristol Naturalists' Society, Proceedings.*  
*British and Foreign Health Resorts, Journal.*  
*British Association of Gas Managers, Reports.*  
*British Association, Reports of.*  
*British Association, Transactions of.*  
*British Association of Waterworks Engineers, Transactions.*  
*British Medical Association.*  
*British Medical Society's Journal.*  
*British Society of Mining Students, Journal.*  
*Bruxelles Acad. Sci. Bull.*  
*Bruxelles Acad. Sci. Mem.*  
*Builder.*  
*Bulletin Geol. Soc., France.*  
*Bulletin Geol. Soc., Japan.*  
*Bulletin Soc. Geol. Belgique.*  
*Bulletin Soc. Imp. Nat. Moscow.*  
*Bulletin Soc. Linn. Norm.*  
*Bulletins Acad. Roy. Belg.*

## C.

*Cambridge Philosophical Society, Proceedings.*  
*Cambridge Philosophical Society, Proceedings.*  
*Cambridge Philosophical Society, Transactions.*  
*Caradoc and Severn Valley Field Club, Transactions.*  
*Cassell's Magazine.*  
*Chambers' Journal.*  
*Chemical Essays.*  
*Chemical Industry, Journal of.*  
*Chemical News.*  
*Chemical Society, Journal.*  
*Chemical Society, Memoirs.*  
*Chemist.*  
*Chester Society of Natural Science, Proceedings.*  
*Chesterfield Institute of Engineers, Transactions.*  
*Chicago Geological Journal.*

*Chicago, Journal of Geology.*

*Circulator.*

*Cleveland Institute of Engineers, Proceedings.*

*Cleveland Literary and Philosophical Society (Science Section)  
Transactions.*

*Cleveland Naturalists' Field Club, Proceedings.*

*Cleveland Naturalists' Field Club, Transactions.*

*Cleveland News.*

*Clifton College Scientific Society, Transactions.*

*Club Alpine Fr. Ann. du.*

*Collectanea Antiqua.*

*Colliery Guardian.*

*Comptes-Rendus Acad. Sci. Paris.*

*Conchology, Journal of.*

*Congrès Géologique International.*

*Contemporary Review.*

*Cornwall, Transactions of the Royal Geological Society.*

*Cotteswold Naturalists' Club, Proceedings.*

*Counting House.*

*Court Guide and County Blue Book.*

*Craven Herald.*

*Croydon Microscopical and Natural History Club, Proceedings  
and Transactions.*

*Croydon Microscopical Club, Reports.*

*Cumberland and Westmorland Association, Transactions.*

*Cyclopædia, Penny.*

#### D.

*Danmarks Geologiska Undersøgelse.*

*Dansk Geologiska förening.*

*Darlington and Teesdale Naturalists' Field Club, Proceedings.*

*Department of Science and Art, Reports.*

*Dudley Midl. Geological Society, Proceedings.*

*Durham University Philosophical Society, Proceedings.*

#### E.

*Eastbourne Natural History Society, Transactions.*

*Eastern Morning News.*

*East Kent Natural History Society, Reports.*

*East Riding Antiquarian Society, Transactions.*

*Edinburgh Geological Society, Transactions.*  
*Edinburgh Journal of Science.*  
*Edinburgh, New Philosophical Journal.*  
*Edinburgh Philosophical Journal.*  
*Edinburgh Philosophical Transactions.*  
*Edinburgh Review.*  
*Edinburgh, Royal Physical Society Proceedings.*  
*Edinburgh Royal Society, Transactions.*  
*Encyclopædia Britannica.*  
*Encyclopædia Metropolitana.*  
*Encyclopédie Scientifique.*  
*Engineer.*  
*Engineering.*  
*Engler's Bot. Jahrb.*  
*Erdm. Journ. Prakt. Chem.*

## F.

*Federated Institute of Brewing, Journal.*  
*Federated Institute of Mining Engineers, Transactions.*  
*Field.*  
*Field Museum of Natural History, Chicago, Publications.*  
*Folklore.*  
*Forester.*  
*Fortnightly Review.*  
*France, Bull. Geol. Soc.*  
*Friend.*  
*Froriep, Notizen.*

## G.

*Geographical Journal.*  
*Geographical Magazine, Scottish.*  
*Geol. Reich, Jahrb. d. k.-k.*  
*Geol. Soc. Japan, Bull.*  
*Geological Association, London, Proceedings.*  
*Geological and Natural History Repository.*  
*Geological and Polytechnic Society of Yorkshire, Proceedings.*  
*Geological and Polytechnic Society of the West Riding of Yorkshire, Proceedings.*  
*Geological Journal, London.*

*Geological Magazine.*  
*Geological Society, Abstracts of Proceedings of.*  
*Geological Society, Proceedings of.*  
*Geological Society, Quarterly Journal of.*  
*Geological Society, Transactions of.*  
*Geological Society of Yorkshire, Proceedings.*  
*Geological Survey, Annual Reports.*  
*Geological Survey Memoirs.*  
*Geological Survey, Summary of Progress of.*  
*Géologique International, Congrès.*  
*Géologique Nord. Soc. Ann.*  
*Géologique Nord. Soc. Mem.*  
*Géologique Soc. France, Bull.*  
*Geologiska Undersögelse, Danmarks.*  
*Geologist.*  
*General Evening Post.*  
*Gentleman's Magazine.*  
*Glacialists' Magazine.*  
*Glasgow Geological Society, Transactions.*  
*Glasgow Medical Journal.*  
*Good Words.*  
*Goole Scientific Society, Reports.*

## H.

*Halifax Antiquarian Society, Transactions.*  
*Halifax (Bankfield) Museum Notes.*  
*Halifax Naturalist.*  
*Hardwicke's Science Gossip.*  
*Harmsworth's Magazine.*  
*Harrogate Advertiser.*  
*Harrogate Water Committee Report.*  
*Hastings and East Sussex Naturalist.*  
*Hebden Bridge Literary and Scientific Society, Recorder's Reports.*  
*Hertfordshire Natural History Society, Transactions.*  
*Historical Society of Lancashire and Cheshire, Transactions.*  
*Home Office, Reports.*  
*Homœopathic Review, Monthly.*  
*Huddersfield Natural History and Photographic Society, Annual Reports.*

*Huddersfield Naturalists' Society, Reports.*  
*Hull and East Riding Portfolio.*  
*Hull and East Riding Teacher.*  
*Hull Conference Souvenir (National Union of Teachers).*  
*Hull Express.*  
*Hull Geological Society, Transactions.*  
*Hull Junior Field Naturalists' Society, Proceedings.*  
*Hull Literary and Philosophical Society, Annual Reports.*  
*Hull Literary Club Magazine.*  
*Hull Museum Publications.*  
*Hull Museum, Quarterly Record of Additions.*  
*Hull Quarterly.*  
*Hull Quarterly and East Riding Portfolio.*  
*Hull Scientific and Field Naturalists' Club, Transactions.*  
*Hutton's Abridg., Philosophical Transactions.*  
*Hygiene, International Congress, Transactions.*

## I.

*Institut, L'.*  
*Institute Notes.*  
*Institute of Civil Engineers, Proceedings.*  
*Institute of Mechanical Engineers, Proceedings.*  
*Institute of Surveyors, Transactions.*  
*International Congress of Hygiene, Congress.*  
*International Geological Congress, Report.*  
*Irish Naturalist.*  
*Iron.*  
*Iron and Steel Institute, Journal.*  
*Iron and Steel Institute, Transactions.*  
*Iron Trade Exchange, London.*

## J.

*Jahrbuch d. k.-k. Geol. Reich.*  
*Jahrbuch für. Min. Neu.*  
*Japan, Bull. Geol. Soc.*  
*Japan, Journ. Coll. Sci. Imp. Univ.*  
*Journ. Coll. Sci. Imp. Univ. Japan.*  
*Journ. Geol. (France).*  
*Journal, Anthropological Institute.*

- Journal, Associated Architectural Societies.*  
*Journal and Transactions, Victoria Institute.*  
*Journal, British and Foreign Health Resorts.*  
*Journal, British Medical Society.*  
*Journal, British Society Mining Students.*  
*Journal, Chemical Society.*  
*Journal de Phys.*  
*Journal, Federated Institute of Brewing.*  
*Journal, Iron and Steel Institute.*  
*Journal, Linnean Society.*  
*Journal, Liverpool Geological Association.*  
*Journal, Manchester Geographical Society.*  
*Journal, Microscopical Society.*  
*Journal, Mining.*  
*Journal Nat. Phil. Chem. and Arts.*  
*Journal, Northampton Natural History Society.*  
*Journal of Botany.*  
*Journal of Chemical Industry.*  
*Journal of Conchology.*  
*Journal of Geology.*  
*Journal of Geology (Chicago).*  
*Journal of Practical Chemistry.*  
*Journal of the Birmingham Natural History and Philosophical Society.*  
*Journal, Pharmaceutical.*  
*Journal Prakt. Chem. Erdm.*  
*Journal, Royal Agricultural Society.*  
*Journal, Royal Dublin Society.*  
*Journal, Royal Geographical Society.*  
*Journal, Royal Institution.*  
*Journal, Royal Microscopical Society.*  
*Journal, Royal Society of Ireland.*  
*Journal, Sanitary Institute.*  
*Journal, Society of Arts.*  
*Journal, State Medicine.*  
*Journal, Yorkshire Ramblers' Club.*

## K.

*Keighley News.*  
*Kendal Mercury and Times.*  
*Knowledge.*

## L.

*La Nature.*  
*Lancashire and Cheshire Naturalist.*  
*Lancashire Naturalist.*  
*Lancet.*  
*Land and Water.*  
*Leeds Geological Association, Transactions.*  
*Leeds Literary and Philosophical Society, Transactions.*  
*Leeds Mercury.*  
*Leeds Naturalists' Field Club, Transactions.*  
*Leicester Literary and Philosophical Society, Transactions.*  
*Leisure Hour.*  
*Liebig. Annal. Chem. Pharm.*  
*Linnean Society, Journal.*  
*Linnean Society, Transactions.*  
*Linnéenne Soc. Norm., Bull.*  
*Lincolnshire Notes and Queries.*  
*L'Institut.*  
*Liverpool Biological Society, Proceedings and Transactions.*  
*Liverpool Geological Association, Transactions.*  
*Liverpool Geological Society, Proceedings.*  
*Local Government Board Reports.*  
*London Geological Journal.*  
*London Iron Trades Exchange.*  
*London Magazine.*  
*London Review.*

## M.

*Magazine, Mining Smelting.*  
*Malacological Society, Proceedings.*  
*Malton Field Naturalists and Scientific Society, Report.*  
*Malton Field Naturalists' Society's Magazine.*  
*Malton Messenger.*  
*Manchester Geological and Mining Society, Transactions.*  
*Manchester Geographical Society, Journal.*

- Manchester Geological Society, Transactions.*  
*Manchester Field Club, Proceedings.*  
*Manchester Field Naturalists and Archæological Society, Reports and Transactions.*  
*Manchester Literary and Philosophical Society, Memoirs.*  
*Manchester Microscopical Society, Annual Report and Transactions.*  
*Manchester Museum Notes.*  
*Manchester Science Students' Assoc., Report.*  
*Magazine of Natural History.*  
*Mechanical Engineers, Proceedings.*  
*Medical Journal, Glasgow.*  
*Medical Journal, Quarterly.*  
*Medical Times and Gazette.*  
*Mediterranean Naturalist.*  
*Memoirs and Proceedings, Manchester Literary and Philosophical Society.*  
*Mémoires Bruxelles Acad. Soc.*  
*Mémoires de la Soc. Spéléologie.*  
*Mémoires du Musée Royal d'Hist. Nat. de Belgique.*  
*Mémoires (Nouveaux) de la Société impériale des Naturalistes de Moscou.*  
*Mémoires Soc. Geol. Nord.*  
*Memoirs, Chemical Society.*  
*Memoirs, Geological Survey.*  
*Memoirs, Literary and Philosophical Society, Manchester.*  
*Memoirs of Palæontographical Society.*  
*Memoirs, Wernerian Natural History Society.*  
*Memoirs, Wernerian Society.*  
*Meteorological Society, Quarterly Journal.*  
*Microscopical Society, Journal.*  
*Midland Institute of Mining Engineers, Transactions.*  
*Midland Institute of Mining Engineers, Proceedings.*  
*Midland Naturalist.*  
*Mineralogical Magazine.*  
*Mineralogie Neu. Jahrb. für.*  
*Mines Ann. des.*  
*Mines, Rev. Univ.*  
*Mining Journal.*  
*Mining Journal, Queensland.*



*Mining Review.*  
*Mining Smelting Magazine.*  
*Miscellanea, Thoresby Society.*  
*Monthly Homœopathic Review.*  
*Monthly Magazine.*  
*Moscow, Bull. Soc. Imp. Nat. Bull.*  
*Municipal Journal.*  
*Museum Gazette.*

## N.

*Natural History Journal.*  
*Natural History Transactions, Northumberland, Durham and Newcastle.*  
*Natural Science.*  
*Naturalist, The.*  
*Naturalists' Journal.*  
*Naturalists' Notes.*  
*Naturalists' Recorder, Yorkshire.*  
*Naturalists' World.*  
*Nature.*  
*Nature Book.*  
*Nature, La.*  
*Nature Study.*  
*Nautical Magazine.*  
*Neues Jahrb. f. Min.*  
*Neues Jahrb. f. Min. Geol. u. Palaont.*  
*New Nature Study.*  
*New Philosophical Journal, Edinburgh.*  
*New Phytologist.*  
*Newcastle Daily Chronicle.*  
*N. Journ. Pharm. Aerzt. Apoth. Chem.*  
*Norfolk and Norwich Naturalists' Society, Transactions.*  
*Northampton Natural History Society, Journal.*  
*North and East Yorkshire Science Notes.*  
*North British Agriculturist.*  
*North of England Institute of Engineers, Transactions.*  
*North of England Institute, Mining and Mechanical Engineers, Transactions.*  
*North Staffordshire Field Club, Annual Reports.*  
*North Staffordshire Naturalists' Field Club, Transactions.*

*Northern Institute Mining Engineers, Transactions.*  
*Northumberland, Durham and Newcastle Natural History Society, Transactions.*  
*Norwich Geological Society, Proceedings.*  
*Notes and Queries.*  
*Notes from the Manchester Museum.*  
*Nouveaux Memoires de la Société impériale des Naturalistes de Moscou.*

## O.

*Ofversigt K. Vetens. Akad. Förhandlingar.*

## P.

*Palæontographical Society, Memoirs.*  
*Palæozoologie, Revue Critique de.*  
*Paris, Comptes Rendus. Acad. Sci.*  
*Parish Magazine, Stokesley and Ingleby Greenhow.*  
*Parliamentary Reports.*  
*Parliamentary Papers.*  
*Pearson's Magazine.*  
*Penny Cyclopædia.*  
*Pharmaceutical Journal.*  
*Philosophical Magazine.*  
*Philosophical Transactions of the Royal Society.*  
*Plymouth Institute, Transactions.*  
*Popular Science Review.*  
*Practical Chemistry, Journal.*  
*Proceedings, Amateur Scientific Society.*  
*Proceedings, American Association for the Advancement of Science.*  
*Proceedings and Reports, Ashmolean Natural History Society of Oxfordshire.*  
*Proceedings and Transactions, Croydon Microscopical and Natural History Club.*  
*Proceedings and Transactions, Liverpool Biological Society.*  
*Proceedings, Ashmolean Society.*  
*Proceedings, Bath Natural History and Antiquarian Field Club.*  
*Proceedings, Birmingham Natural History and Philosophical Society.*  
*Proceedings, Birmingham Philosophical Society.*

- Proceedings, Bristol Naturalists' Society.*  
*Proceedings, Cambridge Philosophical Society.*  
*Proceedings, Chester Society of Natural Science.*  
*Proceedings, Cleveland Institute of Engineers.*  
*Proceedings, Cleveland Naturalists' Field Club.*  
*Proceedings, Cotteswold Naturalists' Club.*  
*Proceedings, Dudley Midl. Geological Society.*  
*Proceedings, Geological and Polytechnic Society of the West  
Riding of Yorkshire.*  
*Proceedings, Geological Society.*  
*Proceedings, Geologists' Association.*  
*Proceedings, Hull Junior Field Naturalists' Society.*  
*Proceedings, Institute of Civil Engineers.*  
*Proceedings, Institute of Mechanical Engineers.*  
*Proceedings, Literary and Philosophical Society, Manchester.*  
*Proceedings, Liverpool Geological Society.*  
*Proceedings, Malacological Society.*  
*Proceedings, Manchester Field Club.*  
*Proceedings, Midland Institute of Mining Engineers.*  
*Proceedings, Norwich Geological Society.*  
*Proceedings, Royal Geographical Society.*  
*Proceedings, Royal Institute.*  
*Proceedings, Royal Institute of British Architects.*  
*Proceedings, Royal Institution.*  
*Proceedings, Royal Physical Society, Edinburgh.*  
*Proceedings, Royal Society.*  
*Proceedings, Royal Society of Edinburgh.*  
*Proceedings, Sheffield Naturalists' Club.*  
*Proceedings, Society of Antiquaries.*  
*Proceedings, University of Durham Philosophical Society.*  
*Proceedings, Warwickshire Field Club.*  
*Proceedings, Yorkshire Geological and Polytechnic Society.*  
*Proceedings, Yorkshire Geological Society.*  
*Proceedings, Yorkshire Naturalists' Club.*  
*Proceedings, Yorkshire Philosophical Society.*  
*Proceedings, Zoological Society.*  
*Progress (Hull).*  
*Progressus Rei Botanicae.*  
*Public Advertiser.*  
*Public Health.*

*Public Works.**Publications, Field Museum of Natural History, Chicago.**Publications of the Surtees Society.*

## Q.

*Quarry.**Quarterly Journal, Geological Society.**Quarterly Journal, Royal Meteorological Society.**Quarterly Journal, Science, Literature and Art.**Quarterly Medical Journal.**Quarterly Record of Additions, Hull Museum.**Quarterly Transactions, Barnsley Naturalists' Society.**Queensland Government Mining Journal.*

## R.

*Recorders' Reports, Hebden Bridge Literary and Scientific Society.**Records Gen. Sci.**Records of the Past.**Report, British Association for the Advancement of Science.**Report, East Kent Natural History Society.**Report, Harrogate Water Committee.**Report, Malton Field Naturalist and Scientific Society.**Report, Manchester Science Students Association.**Report, Rugby School Natural History Society.**Reports and Transactions, Manchester Field Naturalists and Archæological Society.**Reports, Associated Architectural Societies.**Reports, Brighton Natural History Society.**Reports, British Association of Gas Managers**Reports, Croydon Microscopical Club.**Reports, Department of Science and Art.**Reports, Huddersfield Naturalists' Society.**Reports, Hull Literary and Philosophical Society.**Reports, International Geological Congress.**Reports, Local Government Board.**Reports, North Staffordshire Field Club.**Reports, Parliamentary.*

*Reports, Rivers Pollution Commission.*  
*Reports, Scarborough Philosophical and Archæological Society.*  
*Reports, Southport Natural Science Society.*  
*Reports, Tidal Harbours Commission.*  
*Reports, Warwickshire Natural History Society.*  
*Reports, Whitby Literary and Philosophical Society.*  
*Reports, Yorkshire Philosophical Society.*  
*Repository, Geological and Natural History.*  
*Research.*  
*Retford News.*  
*Revue Critique de Paléozoologie.*  
*Rev. Univ. Mines.*  
*Rivers Pollution Commission Reports.*  
*Royal Agricultural Society, Journal.*  
*Royal Dublin Society, Journal.*  
*Royal Dublin Society, Transactions.*  
*Royal Geological Society of Cornwall, Transactions.*  
*Royal Institute, Journal of.*  
*Royal Institute of British Architects, Transactions.*  
*Royal Institute, Proceedings of.*  
*Royal Institution, Proceedings.*  
*Royal Irish Academy, Transactions.*  
*Royal Meteorological Society, Quarterly Journal.*  
*Royal Microscopical Society, Journal.*  
*Royal Physical Society of Edinburgh, Proceedings.*  
*Royal Scot. Soc. Arts.*  
*Royal Society of Edinburgh, Proceedings.*  
*Royal Society of Edinburgh, Transactions.*  
*Royal Society of Ireland, Journal.*  
*Royal Society, Philosophical Transactions of.*  
*Royal Society, Proceedings.*  
*Royal Society, Transactions.*  
*Rugby School Natural History Society, Reports.*

## S.

*Sanitary Institute, Journal.*  
*Sanitary Institute, Transactions.*  
*Sanitary Record.*  
*Særtryk af Aarb. for Nord. Oldk. og Hist.*

*Scarborough Miscellany.*

*Scarborough Philosophical and Archæological Society, Reports.*  
*Science.*

*Science Gossip.*

*Science Notes, North and East Yorkshire.*

*Science Progress.*

*Science Review, Popular.*

*Scientific Roll.*

*Scotsman.*

*Scots Magazine.*

*Scottish Geographical Magazine.*

*Sheffield Daily Telegraph.*

*Sheffield Literary and Philosophical Society, Transactions.*

*Sheffield Naturalists' Club, Proceedings.*

*Sitz. K.-preuss. Akad. Wissensch. Berlin.*

*Smithsonian Institution, Report of.*

*Société Geol. Belgique, Bull.*

*Société Geol. Nord. Ann.*

*Société Geol. Nord. Mem.*

*Société impériale de Naturalistes de Moscou, Nouveaux Mémoires  
de la.*

*Société Imp. Nat. Moscow. Bull.*

*Society of Antiquaries, Proceedings.*

*Society of Arts, Journal.*

*Society of Arts, Transactions.*

*South African Museum, Annals.*

*South Eastern Naturalist.*

*South Eastern Union of Scientific Societies, Transactions.*

*Southport Natural Science Society, Reports.*

*South Wales Institute of Engineering, Transactions.*

*South Yorkshire Viewers' Association, Transactions.*

*Souvenir of Hull Conference (National Union of Teachers).*

*Spéléologie, Mémoires de la Soc.*

*Spelunca.*

*Sphere.*

*Standard.*

*State Medicine, Journal.*

*Stokesley and Ingleby Parish Magazine.*

*Strand Magazine.*

*Summary of Progress of Geological Survey.*  
*Surtees Society, Publications of.*  
*Surveyors Institute, Transactions.*

## T.

*Thoresby Society's Publications, Miscellanea.*  
*Tidal Harbours Commission Reports.*  
*Times.*  
*Tramp.*  
*Transactions, American Philosophical Society.*  
*Transactions (and Journal), Victoria Institute.*  
*Transactions, Barnsley Naturalists' Society.*  
*Transactions, British Association.*  
*Transactions, British Association Waterworks Engineers.*  
*Transactions, Cambridge Philosophical Society.*  
*Transactions, Caradoc and Severn Valley Field Club.*  
*Transactions, Chesterfield Institute of Engineers.*  
*Transactions, Cleveland Literary and Philosophical Society*  
    *(Science Section).*  
*Transactions, Cleveland Naturalists' Field Club.*  
*Transactions, Clifton College Scientific Society.*  
*Transactions, Cumberland and Westmorland Association.*  
*Transactions, East Riding Antiquarian Society.*  
*Transactions, Eastbourne Natural History Society.*  
*Transactions, Edinburgh Geological Society.*  
*Transactions, Federated Institute of Mining Engineers.*  
*Transactions, Geological Society.*  
*Transactions, Glasgow Geological Society.*  
*Transactions, Halifax Antiquarian Society.*  
*Transactions, Hertfordshire Natural History Society.*  
*Transactions, Historical Society of Lancashire and Cheshire.*  
*Transactions, Hull Geological Society.*  
*Transactions, Hull Scientific and Field Naturalists' Club.*  
*Transactions, Institute of Surveyors.*  
*Transactions, Iron and Steel Institute.*  
*Transactions, Leeds Literary and Philosophical Society.*  
*Transactions, Leeds Naturalists' Field Club.*  
*Transactions, Leicester Literary and Philosophical Society.*  
*Transactions, Linnean Society.*

- Transactions, Liverpool Biological Society.*  
*Transactions, Liverpool Geological Association.*  
*Transactions, Manchester Geological and Mining Society.*  
*Transactions, Manchester Geological Society.*  
*Transactions, Manchester Microscopical Society.*  
*Transactions, Midland Institute of Mining and Mechanical Engineers.*  
*Transactions, Norfolk and Norwich Naturalists' Society.*  
*Transactions, North of England Institute of Engineers.*  
*Transactions, North of England Mining and Mechanical Engineers.*  
*Transactions, North Staffordshire Naturalists' Field Club.*  
*Transactions, Northern Institute Mining Engineers.*  
*Transactions, Northumberland, Durham Natural History Society.*  
*Transactions, Plymouth Institute.*  
*Transactions, Royal Geological Society of Cornwall.*  
*Transactions, Royal Institute of British Architects.*  
*Transactions, Royal Irish Academy.*  
*Transactions, Royal Society.*  
*Transactions, Royal Society of Edinburgh.*  
*Transactions, Sanitary Institute.*  
*Transactions, Seventh International Congress of Hygiene.*  
*Transactions, Sheffield Literary and Philosophical Society.*  
*Transactions, Society of Arts.*  
*Transactions, Society of Waterworks Engineers.*  
*Transactions, South Eastern Union of Scientific Societies.*  
*Transactions, South Wales Institute of Engineering.*  
*Transactions, South Yorkshire Viewers' Association.*  
*Transactions, Tyneside Naturalists' Field Club.*  
*Transactions, Weardale Naturalists' Field Club.*  
*Transactions, Yorkshire Agricultural Society.*  
*Transactions, Yorkshire Dialect Society.*  
*Transactions, Yorkshire Naturalists' Union.*  
*Tyneside Naturalists' Field Club, Transactions.*

## U.

*University of Durham Philosophical Society, Proceedings.*



## V.

*Victoria History of York.*

*Victoria Institute, Journal and Transactions.*

## W.

*Warwickshire Field Club, Proceedings.*

*Warwickshire Natural History Society, Reports.*

*Water.*

*Waterworks Engineers, Transactions of British Association of.*

*Weardale Naturalists' Field Club, Transactions.*

*Wernerian Natural History Society, Memoirs.*

*Wernerian Society, Memoirs.*

*Wesley Naturalist.*

*Wesleyan Methodist Magazine.*

*Westminster Review.*

*Westmorland Note Book.*

*West Riding County Council Vacation Courses.*

*Whitby Literary and Philosophical Society, Reports.*

*Whitby Repository.*

*Whitehaven News.*

*White Rose.*

*Wiss. Ergebnisse der Schwedischen Südpolar-Expedition.*

## Y.

*Yorkshire Agricultural Society, Transactions.*

*Yorkshire Archæological and Topographical Journal.*

*Yorkshire Dialect Society, Transactions.*

*Yorkshire Gazette.*

*Yorkshire Geological Society, Proceedings.*

*Yorkshire Herald.*

*Yorkshire Naturalists' Club, Proceedings.*

*Yorkshire Naturalists' Recorder.*

*Yorkshire Naturalists' Union Transactions.*

*Yorkshire Notes and Queries.*

*Yorkshire Observer.*

*Yorkshire Philosophical Society, Annual Reports.*

*Yorkshire Philosophical Society, Proceedings.*

*Yorkshire Post.*

*Yorkshire Ramblers' Club, Journal.*

*Yorkshire Weekly Post.*

Z.

*Zeitschrift für Gletscherkunde.*

*Zeitschrift für Mineralogie.*

*Zoological Journal.*

*Zoological Record.*

*Zoological Society, Proceedings.*

## INTRODUCTION

**I**N compiling this Bibliography, assistance has necessarily been obtained from lists already published, especially with regard to topographical works, which often contain items of geological interest.

Phillips' *Geology of Yorkshire* (1st edition, 1829; 2nd, 1835; 3rd, 1875) contains lists of several of the more important works bearing upon the geology of the county. The Geological Survey publications (of which there is an unusually large number for our county), generally contain lists of papers referring to the particular area covered by a memoir.

During the years 1874-1896, the late James W. Davis printed lists of publications on the geology of the county for each of those years, in the Proceedings of the Yorkshire Geological and Polytechnic Society (Vols. VI.-XII.). A useful account of the chief publications in this Society's proceedings was also given by Davis in his *History of the Society* (forming Vol. X. of the Proceedings, 479 pages, published in 1899). It covered the years 1837 to 1887.

In 1903, Mr. W. Lower Carter compiled a 'Classified Index to the first fourteen volumes of the Proceedings.'\*

Perhaps, however, the most complete lists appeared in *The Naturalist*, and the *Transactions of the Yorkshire Naturalists' Union*. These contained 'Papers and Records published with respect to the Geology and Palæontology of the North of England,' and, of course, included Yorkshire; in these bibliographies each item is plainly marked as to which county it refers. They appeared as follows:—

\* See *Proceedings of the Yorkshire Geological Society*, vol. 15, part 1, pages 96-153.

For 1884 in <i>The Naturalist</i> for Dec. 1885, pp. 394-406.		
„ 1885	„	„ Nov. 1886, pp. 349-362.
„ 1886	„	„ June 1888, pp. 178-188.
„ 1887	„	„ Feb. 1889, pp. 61-67.
„ 1888	„	„ April-May 1890, pp. 121-138.
„ 1889	„	„ Nov. 1890, pp. 339-350.
„ 1890	„	„ Oct.-Nov. 1891, pp. 313-330.
„ 1891	„	„ July-Aug. 1892, pp. 219-234.
„ 1892	„	„ Sept. 1893, pp. 265-279.
„ 1893	„	„ Sept.-Oct. 1898, pp. 273-296.
„ 1894	„	„ Mar.-April 1899, pp. 81-103.
„ 1895	„	„ Oct.-Nov. 1899, pp. 305-324.
„ 1896	„	„ June 1900, pp. 173-191.
„ 1897	„	„ Jan.-Feb. 1901, pp. 17-36.
„ 1898	„	„ Oct.-Nov. 1901, pp. 305-324.
„ 1899	„	„ Oct. 1902, pp. 317-356.
„ 1900	„	„ April 1903, pp. 141-160.
„ 1901	„	„ Oct.-Dec. 1903, pp. 413-416, 463-473.
„ 1902	<i>Trans. Yorks. Nat. Union</i> , pt. 34, 1909,	pp. 1-17.
„ 1903	„	„ pp. 17-33.
„ 1904	„	„ pp. 33-50.
„ 1905	„	„ pp. 51-66.
„ 1906	„	„ pp. 66-85.
„ 1907	„	„ pp. 85-104.
„ 1908	„	„ pp. 104-119.
„ 1909	<i>The Naturalist</i> for July 1911,	pp. 257-270.
„ 1910	„	„ May-June 1912, pp. 152-160; 188-190.
„ 1911	„	„ Nov.-Dec. 1912, pp. 345-352; 371-372.
„ 1912	„	„ July 1913, pp. 261-270.
„ 1913	„	„ May-June 1914, pp. 161-166; 193-199.
„ 1914	„	„ 1915 (in the press).

The first four of these lists (1884\*-1888) were compiled by the late S. A. Adamson and Mr. Alfred Harker ; from 1889 to

\* This year Mr. G. A. Lebour assisted with the Northumberland and Durham entries.

1892 by Mr. Harker alone. Those from 1893 onward have been compiled by myself, and have supplied all the entries in the present bibliography from that date to 1908; I supplied the late C. Fox-Strangways with copies of my lists to be cut up for the purpose. Since the present volume has been in hand, the bibliographies appearing in *The Naturalist* have not contained entries dealing with Yorkshire, except of course, such papers, etc., as contained references to other counties as well as Yorkshire. For the years 1909 to 1914 (*i.e.*, since Fox-Strangways' death), the Yorkshire lists now appear for the first time.

Bibliographical lists relating to the geology of East Yorkshire, which I have compiled, have appeared in the *Transactions of the Hull Geological Society* since 1895.

Useful publications have been issued by the Geological Society of London. These 'Lists of Geological Literature added to the Geological Society's Library during the year,' were compiled by the Librarian, and edited by the Assistant Secretary (Mr. L. L. Belinfante). They have been published since 1893, and have supplied a number of references, particularly to papers appearing in foreign journals.

Since 1890, the Reports of the British Association have contained useful 'Classified Lists of the Contents of the Proceedings and Transactions of the Corresponding Societies,' compiled by Mr. Stewardson, and issued with the Report of the Corresponding Societies' Committee.

In addition, there are the special bibliographies dealing with 'Coast Erosion,' 'Underground Water,' 'Borings and Wells,' etc., which have appeared in the Reports of the British Association and other publications.

Davis and Lees' *West Yorkshire* (1880, 415 pp.), contains a 'Bibliography on Geology and Physical Geography,' 1674-1876 (28 pp.)

A work of particular value, which seems to be almost forgotten, is *Bibliographia Zoologiae et Geologiae*, a 'general catalogue of all books, tracts and transactions on Zoology and Geology, by Prof. Louis Agassiz, corrected, enlarged and edited by H. E. Strickland, M.A., F.G.S., etc.' The work

occupies four substantial 8vo volumes, which were issued by the Ray Society, between 1848 and 1854.\*

Vol. I., issued in 1848, contains entries A-C (pp. 1-506).

Vol. II., issued in 1850, contains entries C-F (pp. 1-492).

Vol. III., issued in 1852, contains entries G-M (pp. 1-657).

Vol. IV., issued in 1854, contains entries N-Z (pp. 1-694).

Also of service is '*The Yorkshire Library: a bibliographical account of books on Topography, Tracts of the Seventeenth Century, Biography, Spaws, Geology, Botany, Maps, Views, Portraits and Miscellaneous Literature relating to the county of Yorkshire, with collations and notes on the books and their authors.*' By William Boyne, F.S.A., author of '*The Tokens of the Seventeenth Century.*' Taylor & Co., London, 1869, 304 pages, 4to.

Another is *The Book of British Topography, a Classified Catalogue of the Topographical Works in the Library of the British Museum relating to Great Britain and Ireland*, by John P. Anderson, London, 1881, royal 8vo, 472 pages (Yorkshire, pages 308-333). A second edition is now in the press.

More recently (1907), Messrs. Constable & Co., published an *Index of Archæological Papers, 1665-1890*,† by George Laurence Gomme (910 pages). This contains particulars of several thousand papers appearing in the various publications of the numerous archæological, etc., societies in the country (a list of which is given). The entries are in alphabetical order. Unfortunately, there is no index to the index, and to ascertain what Yorkshire papers appear in it, necessitates an examination of every entry in the volume.

Other useful items are :—

*British Topography, or an Historical Account of what has been done for illustrating the Topographical Antiquities of Great Britain and Ireland.* Volume I., 4to, 1780, lii. and 792 pp. and 62 pages of indexes (unnumbered); Volume II., 1780,

\* On the last volume the name of Sir William Jardine is added to the title-page. Reference is made to a proposed supplementary volume, but this was never issued.

† From 1891 onward, and until quite recently, Messrs. Constable have published an 'Annual Index of Archæological Papers,' which many of the societies purchased and had bound up with their Transactions.

822 pages and 61 pages of indexes (unnumbered). Yorkshire occupies pages 395-480 of Volume II., and there are many references to the county in the general introduction, the notes on maps, etc. My copy is evidently the first edition ; there were certainly others later.

*The English Topographer, or an Historical Account of all the pieces that have been written relating to the Antiquities, Natural History, or Topographical Description of any part of England.* By an impartial hand [R. Rawlinson], London, 8vo, 1720.

*Bibliotheca Topographica Anglica, or a new and complete Catalogue of all the Books extant relating to the Antiquities, Description and Natural History of England.* By John Worrall, London, 12mo, 1736.

*Anecdotes of British Topography, or an Historical Account of what has been done for illustrating the Topographical Antiquities of Great Britain and Ireland.* By R. Gough. London, 4to, 1768. Another edition, 1780.

*A Catalogue of the Books relating to British Topography and Saxon and Northern Literature, bequeathed to the Bodleian Library in 1799, by Richard Gough, Esq.* By Bulkeley Bandinal, Oxford, 4to, 1814.

*Lives of Topographers and Antiquaries who have written concerning the Antiquities of England, with a complete list of their works.* By J. P. Malcolm. London, 4to, 1815.

*A Catalogue of Books relating to the History and Topography of England, Wales, Scotland, Ireland.* By Sir R. C. Hoare. London, 8vo, 1815.

*A Catalogue of the Hoare Library at Stourhead.* By J. B. Nichols. London, 8vo, 1840.

*A Bibliographical Account of the principal works relating to English Topography.* By William Upcott. 3 vols., 4to, 1818.

*A Handbook to the Topography . . . of England and Wales : being a descriptive account of twenty thousand most curious and rare books.* By J. C. Hotten. London, 8vo, 1863.

*The Science Year Book*, published in recent years, has also contained lists of papers printed by local scientific societies.

Of the various geological publications that have a large proportion of Yorkshire entries, full particulars are given in my book on *Yorkshire's Contribution to Science* (1915). Perhaps the chief of these are *Proceedings of the Yorkshire*

*Geological Society*, *The Geological Magazine*, *The Quarterly Journal*, and other publications of the Geological Society of London; *The Proceedings of the Geologists' Association*, *The Memoirs of the Palæontographical Society*, *The Geological Record*, *The Reports of the British Association for the Advancement of Science*, *The Memoirs of the Geological Survey*, and the Publications of the *Leeds* and *Hull Geological Societies*. *The Naturalist* has also contained many important geological notes.\*

In addition to these a number of local bibliographical works have appeared, ostensibly dealing with local topography, antiquities, etc., but which also include geological items.

In 1895 the late J. Norton Dickons published *Bibliotheca Bradfordiensis*,† or a catalogue of Books, Pamphlets, etc., published at Bradford, 8vo, 241 pages.

In 1906 the late J. Horsfall Turner published a work on *Halifax Books and Authors* (4to, 262 pages). Later, Mr. C. Crossland published a series of papers on 'Halifax Bibliography and Authors,' in the *Transactions of the Halifax Antiquarian Society*. Parts III. and IV. of these contributions dealing with natural history, and, of course, including geology, appeared in 1911 and 1912.

From Sheffield has been issued a *Bibliography of Sheffield and Vicinity, Section I to the end of 1700*, by W. T. Freemantle, 1914, 4to, 285 pages.

In 1912, Mr. A. H. Furnish, the York City librarian, issued a useful *List of Books in the Local Collection relating to the County of Yorkshire, Classified Lists, Yorkshire printed Books, Photographs, Engravings, etc.* (8vo, 172 pages). Another useful book dealing with early York items is Robert Davies' *Memoir of the York Press*, with notices of Authors, Printers and Stationers in the sixteenth, seventeenth and eighteenth centuries, issued in 1868, 8vo, 397 pages.

For Whitby has been issued *Whitby Authors and their Publications* by the Rev. Gideon Smales. Whitby, 1867, pp. 248.

\* For a history of this journal see *The Naturalist* for April, 1915, pages 131-138.

† This title appeared on the cover only.



In Hull nothing of the kind has yet appeared, though the catalogue of Hull books and pamphlets in the Wilberforce Historical Museum, Hull, which I have almost ready for publication, will practically supply the deficiency, as the library is unusually complete. A list of Hull plans and engravings, some of which have a geological interest, appeared in my *Evolution of Kingston-upon-Hull* (1911, 8vo, 203 pages).

With regard to the method of quoting references, and the arrangement of the bibliographical work generally, the scheme as outlined by Mr. C. Davies Sherborn in his 'Notes on Bibliography, Publications and Nomenclature' (see *The Naturalist*, January, 1908, pages 5-9), has been followed.

In connection with the present list, it must be borne in mind that it has been necessary to include everything, no matter how trivial, that has been published bearing in any way upon the geology and physical features of the county, as it can never be known to what extent apparently unimportant notes may be of service to students. Errors in spelling are quoted as they occur in the titles of the papers, though usually an indication of the error has been given by a note, or by a correction in square brackets.

The nature of the present volume necessitates unusual care being taken in the preparation of the index, so that reference may readily be made to the papers of any particular author, or to the publications relating to any particular district, or subject, though for the most part the index deals only with such information as is obtainable from the titles of the publications quoted. Usually, however, authors and editors of journals are careful that the titles sufficiently describe the nature of the contents of the contributions. It only rarely happens that a record is allowed to appear with such a heading as 'A Find !!!' (*sic*) which was the title of a paper describing some fossil footprints found in the Oolitic Sandstone near Whitby, a little while ago. As 'A Find !!!' may mean anything from a threepenny piece to a 'contused optic,' it has been thought advisable in such cases to ignore the actual title of the paper, and to index it from the nature of its contribution to geological science, if any.

I had recently occasion to refer to a well-known standard

work on Yorkshire Geology for information with reference to the source of the pebbles in Coal Measure sandstones. The only way (except reading it), of ascertaining where such information occurred in the volume, was to look under the word 'sand-stone,' which was indexed as appearing on some dozens of pages. To all of these, therefore, reference had to be made in order to obtain the necessary information. It seems clear that there ought to have been an index to the 'sand-stone' entries, or, in other words, an index to the index. The necessity for giving every such detail in the following index, accounts for its unusual length.

PROCEEDINGS  
OF THE  
YORKSHIRE GEOLOGICAL SOCIETY.

---

(C. FOX-STRANGWAYS' MEMORIAL VOLUME).

---

BIBLIOGRAPHY OF YORKSHIRE GEOLOGY.

1534.

- 1 LELAND, JOHN.—The Itinerary of John Leland the Antiquary. [See under T. Hearne, 1710].

1551.

- 1 CAMDEN, W.—Magna Brittannia et Hibernia, Antiqua et Nova. [See under 1720].

1577.

- 1 HOLINSHED's Chronicle. The Firste [and Second] Volume of the Chronicle of Englande, Scotlande and Ireland. 2 Vols. Folio. 1577.

1586.

- 1 CAMDEN, W.—Britannia sive florentissimorum regnorum Angliæ, Scotiæ, Hiberniæ, et Insularum adiacentium et intima antiquitate Chorographica descriptio. [Knaresborough, p. 405, Devil's Arrows, Boroughbridge, p. 406]. 16mo. *London*. Another Ed. 8vo. *London*, 1587. Ed. 3. 8vo, *London*, 1590. German, 8vo. *Frankfurt*, 1590. Ed. 4. 4to. *London*, 1600. Another Ed. Fol. *London*, 1607. Another Ed. 8vo. *Frankfurt*, 1816. Also many later editions by T. P. HOLLAND, E. GIBSON and R. GOUGH.

1587.

- 1 CAMDEN, W.—[See under 1586].

1590.

- 1 CAMDEN, W.—[See under 1586].

1600.

- 1 CAMDEN, W.—[See under 1586].

1607.

- 1 CAMDEN, W.—[See under 1586].

1616.

- 1 CAMDEN, W.—[See under 1586].

1626.

- 1 DEANE, E.—*Spadacrene Anglica, or the English Spaw-Fountaine. Being a Briefe Treatise of the acide or tart Fountaine in the Forest of Knaresborrow in the West Riding of Yorkshire. As also a Relation of other medicinall Waters in the said Forest.* Pp. 32. 4to. *London.* Ed. 2. 1649, under different title, with additions by JOHN TAYLOR. Pp. 39. 4to. *York.* Ed. 3, 1654, 12mo. *York.* Reprinted with additional observations, by M. STANHOPE and others, under the title ‘*Spadacrene Anglica*’; or the English Spaw. Being an account of the Situation, Nature . . . and admirable cures performed by the Waters of Harrogate, and Parts adjacent, and also The Observations of the ingenious Dr. Stanhope . . . . Pp. 41. 8vo. *Leeds*, 1736.
- 2 STANHOPE, MICHAEL.—*Newes out of York-Shire, or an Account of a journey in the true discovery of a Sovereigne Minerall Medicinall Water, in the West Riding of Yorkshire, neare an ancient Towne called Knaresbrough, not inferiour to the Spa in Germany.* 4to. *London.* Another Ed. 4to. Pp. 30. 1627.

1627.

- 1 STANHOPE, MICHAEL.—[See under 1626].

1628.

- 1 STANHOPE, MICHAEL.—*Newes out of York-Shire, or an Account of a Journey in the true discovery of a Souerign*

Minerall Medicinall Water in the West Riding, neere an ancient toun called Knaresborough . . . also a taste of other Minerall Waters, by M. S. Pp. 28. Small 4to.

1632.

- 1 STANHOPE, M.—Cures without Care, or a summons to all such as finde little or no helpe by the use of Physick, to repaire to the Northern Spaw ; wherein by many presidents of a few late yeares, it is evidenced to the world, that infirmities, of their owne nature desperate, and of long continuance, have received perfect recovery by vertue of Minerall waters neare Knaresborow in the West-riding of Yorkshire. Also a description of the said water, and of other rare and usefull springs adjoining, the nature and efficacie of the Minerals contained in them, with other not impertinent notes. 4to. *London*.
- 2 — A Relation of certain particular cures, done by vertue of Mineral waters, neare Knaresborow in the West-riding of the county of Yorkshire. 4to. *York*. Another Ed. 4to. *York*, 1649. Another Ed. 8vo. 1654. Reprinted as second part of Dr. Dean's Spad. Ang. 8vo. *Leeds*, 1736.

1649.

- 1 DEANE, E.—Spadacrene Anglica. [See under 1626].

1652.

- 1 FRENCH, J.—The York-shire Spaw ; or, a treatise of four Famous Medicinal Wells, viz., the Spaw or Vitrioline-Well ; the stinking, or Sulphur-Well ; the Dropping, or Petrifying-Well ; and St. Mugnus-Well near Knaresborow in Yorkshire ; together With the causes, virtues and use thereof. [Long dissertation on the origin of the springs]. 8vo. *London*. Another Ed. Pp. 124. 1654. Reprinted under the title ' A pocket companion for Harrowgate Spaw.' 8vo. *Halifax*, 1760.

1654.

- 1 DEANE, E.—Spadacrene Anglica. [See under 1626].
- 2 FRENCH, J.—[See under 1652].
- 3 STANHOPE, M.—[See under 1632].

## 1655-1673.

- 1 DODSWORTH, R., and W. DUGDALE.—*Monasticon Anglicanum sive Pandectæ Coenobiorum, Benedictinorum, Cisterciensium, Carthusianum. A primordiss ad eorum usque dissolutionem. Ex. MSS. Codd. Ad Monasteria olim pertinentibus ; Archivis, Turrium Londinensis, Eboracensis ; Curiarum Siaccarii, Augmentationum ; Bibliothecis Bodleiana ; Coll. Reg. Coll. Bened. Arundelliana, Cottoniana, Seldoniana, Huttoniana aliisque digesti.* [Minerals at several places in Yorkshire referred to]. 3 vols. fol. *London.* Many editions.
- 2 DUGDALE, W.—[See R. Dodsworth].

## 1656.

- 1 SHORT.—*Spadacrene Eboracensis.* [See under G. Neale, 1734].

## 1660.

- 1 WITTIE, R.—*Scarborough Spaw ; or, a Description of the Nature and Vertues of the Spaw at Scarborough in Yorkshire,* 8vo. *London.* Another Ed. 8vo. *York,* 1667.

## 1662.

- 1 DUGDALE, W.—*The History of Imbanking and Drayning of Divers Fenns and Marshes, Both in Foreign Parts, and in this Kingdom ; and of the Improvements thereby.* [Plan of Hatfield Chase]. Fol. *London.* Ed. 2. Revised and corrected by C. N. COLE. Fol. *London,* 1772.
- 2 FULLER, T.—*The History of the Worthies in England.* [Medicinal Waters. Pt. iii. Pp. 188, 189]. Fol. *London.*

## 1667.

- 1 WITTIE, R.—*Scarborough Spaw.* [See under 1660].

## 1669.

- 1 SIMPSON, W.—*Hydrologia Chymica ; or, The Chymical Anatomy of the Scarborough and other Spaws in Yorkshire. Wherein are interspersed Some Animadversions upon Dr. Wittie's lately Published Treatise of the Scarborough-Spaw. Also, a short Description of the Spaws at Malton and Knaresbrough.* [Malton Spaw, pp. 134, 135 ; The Sweet Spaw and the Sulphur Well at Harrogate,

pp. 136-147]. 8vo. *London*. Abstract and review in *Phil. Trans.*, vol. i., No. 42, pp. 850-852 ; No. 51, pp. 1037-1040.

- 2 SIMPSON, W.—Alom Works at Whitby—[See under 1867]. with other not impertinent notes. 4to. *London*.
- 3 WITTIE, R.—Pyrologia Mimica ; or, an Answer to Hydrologia Chymica of William Sympson Phylo-Chymico-Medicus ; In Defense of Scarbrough Spaw. Wherein The Five Mineral Principles of the said Spaw are defended against all his objections (by plain Reason and Experiments, and further confirmed by a Discovery of Mr. S., his frequent Contradictions and manifest Recantation. Also. A Vindication of the Rational Method and Practice of Physick called Galenical and a Reconciliation betwixt that and the Chymical). Likewise a further Discourse about the Origin of Springs. Pp. 312. 8vo. *London*. Noticed in *Phil. Trans.*, No. 49, p. 999, and No. 51, p. 1037. See also *Phil. Trans.*, No. 52, pp 1050-1055 ; pp. 1074-1082 bis ; No. 56, pp. 1128-1131 ; and No. 57, pp. 1154-1156.

## 1670.

- 1 SIMPSON, W.—Hydrological Essays ; or, a Vindication of Hydrologia Chymica ; Being a further Discovery of the Scarbrough Spaw and of the right use thereof, and of the Sweet Spaw and Sulphur Well at Knaresborough : with a brief Account of the Allom Works at Whitby. Pp. 159. 8vo. *London*. Noticed in *Phil. Trans.*, No. 62, pp. 2032-2034.
- 2 TONSTALL, G.—Scarbrough Spaw spagyrically anatomized. Pp. 63. 16mo. *London*.

## 1671.

- 1 LISTER, M.—A Letter . . . on that of M. Steno concerning Petrify'd shells. [Ironstone quarries of Adderton in Yorkshire, p. 2283]. *Phil. Trans.*, vol. vi., No. 76, pp. 2281-84. *Hutton's Abridg.*, vol. i., pp. 645-646.

## 1672.

- 1 TONSTALL, G.—A New-years-gift for Doctor Witty ; or, the Dissector anatomized : Which is a reply to the Discourse Intituled, An Answer to all that Doctor Tonstall has

writ, or shall hereafter Write, against Scarbrough Spaw. Pp. 162. 16mo. *London*. Noticed in *Phil. Trans.*, vol. vii., for 1672. No. 85, pp. 5019-5021.

- 2 WITTIE, R.—Scarbrough's Spagyricall Anatomizer dissected ; or, an Answer to all that Dr. Tonstall hath Objected in his Book against Scarborough's Spaw. . . . As also reflections upon a late Piece, called Vindication of Hydrologia Chymica. Pp. 127. 16mo. *London*.

1673.

- 1 BLOME, R.—Britannia ; or, a Geographical Description of the Kingdoms of England, Scotland, and Ireland, with the Isles and Territories thereto belonging . . . [Knaresborough Wells, p. 259]. Fol. *London*.

1674.

- 1 LISTER, M.—A Description of certain Stones figured like plants, and by some Observing Men esteemed to be Plants petrified. *Phil. Trans.*, vol. viii., No. 100. p. 6181.
- 2 RAY, JOHN.—A Collection of English Words not generally used, with their Significations and Original, in two Alphabetical Catalogues. The one of such as are proper to the Northern, the other to the Southern Counties. With Catalogues of English Birds and Fishes : and an Account of the preparing and refining such Metals and Minerals as are gotten in England. [The Allom Works at Whitby in Yorkshire, pp. 139-141. Ed. 2, pp. 201-203]. Pp. 148. 8vo. *London*. Ed. 2, 120. 1691.

1675.

- 1 LISTER, M.—Of an odd figured Iris. [Rainsborough Scar on Ribble and Eshton Terrace, Craven]. *Phil. Trans.*, vol. ix., for 1674, No. 110, p. 222.
- 2 ——— *Glossoptera tricuspis non-serrata*. [Hindershelf Park, near Malton]. *Ibid.*, p. 223.
- 3 ——— Of certain *Dactili Idæi* ; or, true *Lapides Judaici*, for kind found with us in Britain. [Spines of *Cidaris* from Newton and Hildenley]. *Ibid.*, p. 224.
- 4 ——— A Letter containing his Observations of the *Astroites* ; or, Star-stones. [Pentacrinites from Bugthorpe and Lepington]. *Ibid.*, vol. x., No. 112, pp. 274-279.



- 5 SIMPSON, W.—*Zymologia Physica*; or, a brief Philosophical Discourse of Fermentation, from a new Hypothesis of Acidum and Sulphur. . . . With an additional Discourse of the Sulphur-bath at Knaresbrough. Pp. 149. 8vo. *London*. The Discourse published separately. Pp. 28. 8vo. *London* [1675].

1678.

- 1 LISTER, M.—*Historiæ Animalium Angliæ tres tractatus unus de Araneis alter de Cochleis tum Terrestribus tum Fluvialibus. Tertius de Cochleis Marinis*. . . . [Keighley, p. 247; Filey, p. 22]. 8vo. *London*.  
 2 WITTIE, R.—*Fons Scarburgensis: sive Tractatus de Omnis Aquarum generis origine ac usu. Particulariter de Fonti Minerali apud Scarbrough in Comitatu Eboracensi Angliæ*. Pp. 235. 8vo. *London*.

1679.

- 1 COLWALL, D.—An Account of the English Alum-Works. *Phil. Trans.*, vol. xii., No. 142, pp. 1052-1056. *Hutton's Abridg.*, vol. ii., pp. 458-461.  
 2 SIMPSON, W.—The History of Scarbrough-Spaw; or, a further Discovery of the excellent Vertues thereof. . . . [The rarities observable at Scarborough. Pyrites, Fossils, Alum Works, pp. 119-126]. Pp. 126. 12mo. *London*. Another Ed., with different title, 1680.

1680.

- 1 SIMPSON, W.—A History of Scarbrough Spaw. [See under 1679].

1682.

- 1 LISTER, MARTIN.—[See under 1684].

1683.

- 1 PRYME, ABRAHAM DE LA.—[See under 1870].

1684.

- 1 LISTER, MARTIN.—*De Fontibus Medicatis Angliæ Exercitatio Nova Prior*. [Alludes to Knaresborough and Harrogate, pp. 26, 28, 30, 45, 57, 62]. Pp. 64. 8vo. *Frankfurt and Leipsic*. 12mo. *Leyden*, 1686. (? Earlier edition, 4to. *York*, 1682].

- 2 LISTER, MARTIN.—An Ingenious Proposal for a new sort of Maps of Countrys, together with Tables of Sands and Clays, such chiefly as are found in the North parts of England, drawn up about 10 years since, and delivered to the Royal Society, March 12th, 1683. *Phil. Trans.*, vol. xiv., No. 164, pp. 739-746, and duplicate pp. 737, 738.

1686.

- 1 LISTER, MARTIN.—Exercitationes et Descriptiones Thermarum ac Fontium Medicatorum Angliæ. Eorum originem, salubrem usum et potationis modum tradentes. [Knaresborough and Harrogate, pp. 26, 29, 32, 53]. Pp. 156. 12mo. *Leyden*. Another Ed. 12mo. 1689. Partly a reprint of 'De Fontibus,' 1684.

1689.

- 1 LISTER, MARTIN.—[See under 1686].

1691.

- 1 RAY, JOHN.—A Collection of English Words not generally used, etc. [See under 1674].

1693.

- 1 LISTER, M.—An Account of certain transparent Pebbles, mostly of the shape of the Ombriæ or Brontiaæ. [Filey Brig and Scarborough]. *Phil. Trans.*, vol. xvii., No. 201, p. 778.

1694.

- 1 LEIGH, C.—Phthisiologia Lancastriensis, cui accessit Testamentum Philosophicum de Mineralibus Aquis In eodem Comitatu Observatis. [Knaresborough, pp. 114, 136; Harrogate, p. 126]. 12mo. *London*.

1697.

- 1 FLOYER, JOHN.—An Enquiry into the Right Use and Abuses of the Hot, Cold, and Temperate Baths in England. [Pp. 113-117. A Letter from Dr. CLAYTON concerning the Virtues of St. Mungus' Well, near Knaresborough in Yorkshire]. Pp. 144. 8vo. *London*. Ed. 2, 'Ancient Psychrolusy revived,' 1702; Ed. 3, History of Hot and Cold Bathing, Ancient and Modern; with an Appendix by Dr. E. BAYNARD. 8vo. *London*, 1702, 1706, 1709,

1715, 1722 (styled Eds. 1-5); Latin. 8vo. *Leyden*, 1699; French, 1718; German, 8vo. *Breslau*, 1729.

- 2 LEIGH, C.—*Exercitationes quinque. De Aquis Mineralibus, Thermis Calidis, Morbis Acutis, Morbis Intermittentibus; Hydrope.* [Knaresborough Springs]. 12mo. *Oxford*.
- 3 RICHARDSON, R.—Part of a Letter containing a Relation of Subterraneous Trees, dug up at Youle [on the Humber, about 12 miles below York] in Yorkshire. *Phil. Trans.*, vol. xix., No. 228, pp. 526-528. *Hutton's Abridg.*, vol. iv., pp. 162, 163.

1699.

- 1 ALLEN, B.—The Natural History of the Chalybeate and Purging Waters of England, with their particular Essays and Uses. . . . [Knaresborough, pp. 19, 20]. 8vo. *London*. Noticed in *Phil. Trans.*, No. 251, vol. xxi., pp. 146-148. [See also B. Allen, under 1711].
- 2 FLOYER, JOHN.—*Inquisitio in verum Usus et Abusus calidiorum, frigidiorum, a temperatorum Angliæ balnearum.* [Pp. 258-261 *Literæ D.D. Claytonii concernentes virtutes Scaturiginis St. Mungi prope Knaresborouhum in agro Eboracensi*]. Impr. in Nicolaus Vallerius. *Testamina Physico-Chymica circa Aquas Thermales Aquisgranensis*. Pp. 282. 8vo. *Leyden*.

1700.

- 1 RICHARDSON, R.—*De Entrocho lapide, Conchitis et Lithophytis seu Plantis mineralibus agri Eboracensis: de Bufonibus mediis danis inclusis, et depictis aliquot in Schisto carbonaria Infectis.* [Malham, p. 106; Inglebrough, Pendle, p. 107]. In E. LHWYD. *Lithophylacii Britannici Ichnographia*. 8vo. *London*.
- 2 LISTER, M., and —. MALEVERER.—Of Coal-Borings, which Role or Record he had from Mr. Maleverer of Arnecliffe in Yorkshire. [Sections of seven borings near Leeds]. *Phil. Trans.*, vol. xxi., No. 250, pp. 70-78. *Hutton's Abridg.*, vol. iv., pp. 353, 354.
- 3 MALEVERER.—[See M. Lister].

1701.

1. DE LA PRYME, A.—Part of a Letter, concerning Trees found under Ground in Hatfield Chase. *Phil. Trans.*, vol. xxii.,

No. 275, pp. 980-992, and vol. xxiii., No. 277, p. 1073.  
*Hutton's Abridg.*, vol. iv., pp. 624-630.

## 1702-1722.

- 1 FLOYER, JOHN.—An Enquiry into the Right Uses and Abuses of the Hot, Cold, and Temperate Baths in England. 'Ed. 1,' 1702; 'Ed. 2,' 1706; 'Ed. 3,' 1709; 'Ed. 4,' 1715; (an edition in French, 1718), 'Ed. 5,' 1722. [See under Floyer, 1697].

## 1706.

- 1 FLOYER, JOHN.—[See under 1697].

## 1709.

- 1 FLOYER, JOHN.—[See under 1697].
- 2 GALE, T.—Antonini iter Britanniarum Commentariis Illustratum. [Devil's Arrows at Boroughbridge, p. 17]. 4to. *London*.
- 3 SHORT, T.—Memoirs of the Natural History of Medicinal Waters. 8vo. *London*.

## 1710-1712.

- 1 HEARNE, T.—The Itinerary of John Leland the Antiquary. Published from the Original MS. in the Bodleian Library (1534). [Devil's Arrows at Boroughbridge, fol. 101; Dropping Well at Knaresborough, fol. 103]. 9 vols. 8vo. *Oxford*. Ed. 2, 9 vols., 8vo. *Oxford*, 1744. Ed. 3, 1770.

## 1711.

- 1 ALLEN, B.—The Natural History of Mineral Waters of Great Britain. [Knaresborough Springs, pp. 31 and 40]. 8vo. *London*. Partly a reprint of that in 1699.

## 1715.

- 1 FLOYER, JOHN.—[See under 1697].
- 2 THORESBY, RALPH.—Ducatus Leodiensis; or, the Topography of the Ancient and Populous Town and Parish of Leedes, and parts adjacent in the West-Riding of the County of York. [Ancient Ironstone Workings in the Forest of Knaresborough, p. 106]. Fol. *London*.

## 1718.

- 1 FLOYER, JOHN.—[See under 1697].

## 1720-1731.

- 1 CAMDEN, W.—*Magna Britannia et Hibernia, Antiqua et Nova, or, a New Survey of Great Britain, wherein to the Topographical Account given by Mr. Cambden [sic] and the late Editors of his Britannia, is added a more large History, not only of the Cities, Boroughs, Towns, and Parishes mentioned by them, but also of many other Places of Note and Antiquities since discovered.* [Boroughbridge and Knaresborough, vol. vi., pp. 374, 375]. 6 vols. 4to. *London.* Original latin edition, 1551-1623.
- 2 FLOYER, JOHN.—[See under 1697].

## 1722.

- 1 FLOYER, JOHN.—[See under 1697].

## 1723.

- 1 COLLINS, G.—*Great Britain's Coasting Pilot, being a New Survey of the Sea Coast.* [Charts of the Yorkshire Coast]. Fol. *London.* Other editions, 1724, 1738, 1785.

## 1724.

- 1 COLLINS, G.—[See under 1723].
- 2 STUKELEY, W.—*Itinerarium Curiosum ; or, An Account of the Antiquities and remarkable curiosities in nature or art, observed in travels through Great Britain.* [Devil's Arrows at Boroughbridge, vol. ii., p. 74]. 2 vols. Fol. *London.*

## 1728.

- 1 WOODWARD, J.—[See under 1729].

## 1729.

- 1 WOODWARD, J.—*An Attempt Towards a Natural History of the Fossils of England ; in a Catalogue of the English Fossils in the Collection of J. Woodward.* [Several from Yorkshire localities]. 2 vols. 8vo. *London.* Vol. ii., dated 1728.
- 2 FLOYER, JOHN.—[See under 1697].

## 1731.

- 1 CAMBDEN, —. [sic].—*Magna Britannia et Hibernia, Antiqua & Nova, or, A New Survey of Great Britain* . . . . Vol. 6. [Yorkshire, pp. 331-710 ; includes

references to spaw wells, petrifying springs, etc.; the Geological Sections are reprinted in *The Naturalist* for October, pp. 307-314, and November, 1914, pp. 337-352].  
*London.* MDCCXXI.

- 2 FLOYER, JOHN.—[See under 1697].
- 3 HOFFMANN, F.—Experiments and Observations upon Mineral Waters, with notes by PETER SHAW. 8vo. *London.* Ed. 2 [1743].
- 4 SHAW, PETER.—[See under F. Hoffmann].

## 1733.

- 1 ANON.—A More particular Account than what has yet been published, of the terrible Earthquake that happen'd at Hornsey, near Hull, in Yorkshire. In a letter to a friend. [Obviously exaggerated]. Foolsap broadside. 1 p. See also *The Naturalist*, October, 1914, pp. 302-303.

## 1734.

- 1 ANON.—An Account of the Nature and Use of Scarborough Spaw-Water: in a short view of the most celebrated writers on that subject. Pp. 10. 8vo. *London.* Annexed to 'A Journey from London to Scarborough in Several Letters from a Gentleman there to his Friend in London.' Pp. 68. 8vo. *London.*
- 2 NEALE, G.—Spadacrene Eboracensis: Or, the Yorkshire Spaws, near Knaresburgh: being a description of Five famous Medicinal Wells, viz.: 1, The Sweet Spaw; 2, The Sulphur, or stinking Well; 3, The Dropping Well; 4, The Black Spring, found out by the author; 5, St. Magnus's or St. Mungo's Well. All which Wells, with their Situation, Operation, Virtues, etc., are described. Together with the Hot and Cold Baths; as likewise Fume-Baths. [A portion published posthumously by Dr. Short, vol. i., pp. 286-293. This was written in 1656 but not published. 'A mutilated copy of the MS. was given by his widow to Dr. Short, which was introduced by way of notes in that author's work.' Calvert, 1831, p. 31.]
- 3 SHAW, P.—An Enquiry into the Contents, Virtues, and Uses of the Scarborough Spaw-Waters: with the Method of examining any other Mineral-Water. Pp. 166. 8vo. *London.*

- 4 SHORT, T.—The Natural Experimental, and Medicinal History of the Mineral Waters for Derbyshire, Lincolnshire and Yorkshire, particularly those of Scarborough. . . . Together with the Natural History of the Earth's Minerals and Fossils through which the chief of them pass. [Knaresborough Dropping Well, pp. 105, 106 ; Harrogate Waters, pp. 237-266, 285-296]. 2 vols. 4to. *London* and *Sheffield* Vol. ii., 1740.

1735.

- 1 ANON [? P. SHAW].—A Dissertation on the Contents, Virtues and Uses of Cold and Hot Mineral Springs ; particularly those of Scarborough. 8vo. *London*.

1736.

- 1 DRAKE, F.—Eboracum : or, the History and Antiquities of the City of York. . . . [Devil's Arrows at Boroughbridge, Plumpton Rocks and building stones, pp. 25-29]. Fol. *London*.
- 2 STANHOPE, M.—Spadacrene Anglica. [See Deane, 1626 ; and Stanhope, 1632].

1737.

- 1 ATKINS, J.—A Compendious Treatise on the Contents . . . of Cold and Hot Mineral Springs in general, particularly the celebrated Hot Waters of Scarborough. 8vo. *London*.

1738.

- 1 COLLINS, G.—Great Britain's Coasting Pilot. [See under 1723].
- 2 WRIGHT, T.—The Antiquities of the Town of Halifax in Yorkshire. [Building stone and coal, p. 15]. Pp. 207. 12mo. *Leeds*. Reprinted. Pp. 96. 8vo. *Bingley*, 1884.

1739.

- 1 SCOTT, J.—Draught of the River Humber. Engraved and printed by T. Hilbert. Ed. 4. *Hull*.

1740.

- 1 SHORT, T.—An Essay towards a Natural, Experimental and Medicinal History of the Principal Mineral Waters of Cumberland, Northumberland, Westmoreland, Bishoprick of Durham, Lancashire, Cheshire, Staffordshire,

Shropshire, Worcestershire, Gloucestershire, Warwickshire, Northamptonshire, Leicestershire and Nottinghamshire. Particularly those of Neville Holt, Cheltenham, Weatherslach, Hartlepool, Astrope, Cartmell, etc. . . . [Harrogate Sulphur Well, p. 141; Dropping Well and Sweet Spaw, p. 148]. 4to. *Sheffield*. Being the second volume of the mineral Water of England. [Vol. i., 1734].

1742.

- 1 ATKINS, J.—A Dissertation on the Contents, Virtues, and Uses of Cold and Hot Mineral Springs. Being pp. 312-350 of the Navy Surgeon; or, Practical System of Surgery. . . . [Alludes to Harrogate]. 8vo. *London*.

1743.

- 1 HOFFMANN, F.—Experiments and Observations upon Mineral Waters. [See under 1731].

1744.

- 1 HEARNE, T.—The Itinerary of John Leland the Antiquary. [See under 1710]. Ed. 2.

1749.

- 1 KNOWLTON, J.—An Account of Two extraordinary Deer's Horns, found underground in different parts of Yorkshire. [In the Rye at Ness, near Malton, and at Cowthorpe]. *Phil. Trans.*, vol. xlv., for 1746, No. 479, pp. 124-127.

1752.

- 1 RUSSEL, R.—A Dissertation on the Use of Sea Water. . . . Translated from the Latin. 12mo. *Oxford*. Ed. 2. 1753, 8vo. *Oxford*, Ed. 4, 1760, to which is added an Account of the Nature, Properties and Uses of all the remarkable Mineral Waters of Great Britain, by W. OWEN. [Harrogate, pp. 272-273; Knaresborough, pp. 301, 302, misprinted 330]. 12mo. *London*. Ed. 5. 8vo. *London*, 1769.

1753.

- 1 RUSSEL, R.—[See under 1752].

1755.

- 1 WESLEY, JOHN.—A Strange Phenomenon. [Account of the landslip on Black Hambledon by which Gormire was



formed upon, March 25th, 26th, and 27th]. Contributed to *London Magazine*, *Gentleman's Magazine*, the *Public Advertiser*, and *Scots Magazine*. See also *Wesleyan Methodist Magazine*, 1843, pp. 206-8. Reprinted. 'The Journal of the Rev. John Wesley, A.M.' (Standard Edition). Vol. iv., pp. 117-120.

1756.

- 1 CASTRO, T. DE.—On the Use and Abuse of Mineral Waters in England. (In Italian). 8vo. *London*.

1757.

- 1 DA COSTA, E. M.—A Natural History of Fossils. [Stone from Nunnington, p. 129]. 4to. *London*.
- 2 LUCAS, C.—An Analysis of Dr. Rutty's Methodical Synopsis of Mineral Waters. [Harrigate (sic) sulphur water, p. 37]. Pp. 101. 8vo. *London*.
- 3 RUTTY, J.—A Methodical Synopsis of Mineral Waters, comprehending The Most celebrated Medicinal Waters both Cold and Hot of Great Britain, Ireland, France, Germany, and Italy, and several other parts of the World. [Harrigate (sic) and Knaresborough Wells, pp. 197 and 477]. Pp. 660. 4to. *London*. 8vo. *Dublin*, 1757; Ed. ? 1761; Ed., 4to., 1767.

1758.

- 1 BURTON, J.—Monasticon Eboracense : and the Ecclesiastical History of Yorkshire, containing . . . [Ancient iron-stone workings, pp. 329, 332, 360, 362, 363]. Fol. *York*.
- 2 DA COSTA, E. M.—An Account of the Impressions of Plants on the Slates of Coals. [Robin Hood's Bay and Coalbrookdale]. *Phil. Trans.*, vol. l., part 1, for 1757, pp. 228-235.
- 3 RUTTY, J.—A Free and Candid Examination of a Pamphlet, intituled, An Analysis of Dr. Rutty's Methodical Synopsis of Mineral Waters. [Harrigate (sic), p. 10]. Pp. 50. 8vo. *London*.

1759.

- 1 CHAPMAN, W.—An Account of the fossile (sic) Bones of an Allegator, found on the Sea-shore, near Whitby in Yorkshire. [In alum shale, half a mile from Whitby]. *Phil.*

*Trans.*, vol. 1, pt. ii., for 1758, pp. 688-691. Also *Gentleman's Mag.*, vol. xxix., pp. 463, 572 ; vol. xxx., p. 452.

- 2 WOOLER, —.—A Description of the fossil Skeleton of an Animal found in the Alum Rock near Whitby. *Ibid.*, pp. 786-790 ; *Hutton's Abridg.*, p. 289.

## 1760.

- 1 FRENCH, J.—A Pocket Companion for Harrowgate Spaw, or, a particular Account of the several Medicinal Springs at, or near, that Place. Shewing Their different Nature and Uses towards restoring Health and Strength. With Directions how to Use the Waters with Advantage. Pp. 56. 12mo. *Halifax*. Published originally by Dr. J. French, now revised by J. WOOD. [See under 1652].
- 2 MONRO, ALEX.—Treatise on Mineral Waters. 2 vols. 8vo. *London*.
- 3 OWEN, W.—[See R. Russel].
- 4 RUTTY, J.—Thoughts on the different Impregnation of Mineral Waters ; more particularly on the Existence of Sulphur in some of them. [Mentions Bilton and Harrogate]. *Phil. Trans.* for 1759, p. 392.
- 5 RUSSEL, R.—A Dissertation on the use of Sea Water, etc. [See R. Russell, 1752].
- 6 WOOD, J.—[See J. French].

## 1761.

- 1 MICHELL, J.—Conjectures concerning the Cause, and Observations upon the Phenomena of Earthquakes. . . . [The Alum Shale of Whitby, p. 591]. *Phil. Trans.*, vol. li., for 1760, pp. 566-634. *Hutton's Abridg.*, pp. 448-472.
- 2 RUTTY, J.—A Methodical Synopsis of Mineral Waters, etc. [See under 1757].

## 1765.

- 1 ANON [SHORT, T.]—A General Treatise on various Cold Mineral Waters in England, But more particularly on those at Harrogate, Thorpe-arch, Dorsthill, Wigglesworth, Nevill-holt and others of the like Nature, with their principal virtues and uses. Pp. viii., 248. 8vo. *London*.

1766.

- 1 SHORT, T.—Institutes ; or, an Introduction to the Examination of Mineral Waters, proposing methods for discovering their impregnating principles with greater Certainty and Exactness than has hitherto been done. [Mentions Harrogate, Malton, Scarborough, Thirsk, etc.]. Pp. 194. 8vo. *London*.
- 2 ——— Treatise on the Different sorts of Cold Mineral Waters in England. 8vo. *London*.

1767.

- 1 RUTTY, J.—A Methodical Synopsis of Mineral Waters, etc. [See under 1757].

1768.

- 1 YOUNG, A.—A Six Months' Tour through the North of England, etc. [See under 1770].

1769.

- 1 HARGROVE, E.—The History of the Castle, Town and Forest of Knaresborough, with an Account of Harrogate and its Medicinal Waters. [Devil's Arrows, pp. 42, 43]. Pp. 43. 8vo. *Knaresborough and York*. Ed. 2. 8vo. *York*, 1775. Ed. 3. Pp. 144. 12mo. *York*, 1782. Ed. 4. 1789. Ed. 5. Pp. 382. 1798. Ed. 6. 12mo. *Knaresborough*, 1809. Ed. ? 1821. Ed. 7. 1832.
- 2 OWEN, W.—[See R. Russel]. A Dissertation on the Use of Sea Water, etc. Ed. 5. [See R. Russel, 1752].

1770.

- 1 ANON.—A Description of England and Wales, containing a particular Account of each County with its . . . Mineral Waters, Soils, Fossils, Caverns, Minerals . . . Yorkshire, vol. x., pp. 119-288. [Malton, Croft and Scarborough Spaw, p. 127 ; Harrogate, p. 128. Mineral Springs, pp. 127-131 ; Soils, etc., pp. 131-141. Devil's Arrows, p. 192. Alum Shale, p. 269. Fossils at Whitby, pp. 272-274. Scarborough Spaw, p. 277]. 12mo. *London*.
- 2 MONRO, DONALD —A Treatise on Mineral Waters. [Bilton, p. 181. Harrogate, pp. 193-198, 271-273. Ripon, pp. 203. Knaresborough, pp. 464 465]. 2 vols., 8vo. *London* Another Ed. 1777.

- 3 WALKER, J.—Dissertatio Chemica Inauguralis. De Aquâ Sulphurea Harrowgatensi . . . Pp. 46. 8vo. *Edinburgh*.
- 4 YOUNG, A.—A Six Months' Tour through the North of England: containing an Account of the present State of Agriculture, Manufactures and Population, in several Counties of this Kingdom. Ed. 2., 1770-1771, 4 vols. 8vo. *London*. Ed. 1. 1768?
- 5 HEARNE, T.—The Itinerary of John Leland the Antiquary. Ed. 3. [See under T. Hearne, 1710-1712].

## 1771.

- 1 JEFFERYS, T.—The County of York surveyed in 1767-1770. [Map in 20 sheets, each measuring 2 ft. by 2 ft.].

## 1772.

- 1 COLE, C. N.—[See under W. Dugdale].
- 2 DUGDALE, W.—The History of Imbanking and Drayning of Divers Fenns and Marshes. Revised by C. N. Cole. [See under 1662].

## 1773.

- 1 ALEXANDER, W.—Directions for the use of Harrowgate Waters. 8vo. *Edinburgh*. Ed. 2. Pp. 92. 1780. 8vo. *Knaresborough and Harrogate*. Ed. 3. 1787.
- 2 INGRAM, DALE.—Experiments with a New Well-Water discovered at Epsom, and compared with Harrigate (sic); showing their affinity, and ascertaining their contents. *Gentleman's Magazine*, vol. xliii., pp. 125-126.
- 3 MONRO, D.—An Account of the sulphureous mineral waters of Castle-Loed, and Fairburn in the county of Ross; and of the salt purging waters of Pitkeathly in the county of Perth in Scotland. [These waters compared with Harrogate]. *Ibid.*, pp. 284, 285.

## 1774.

- 1 JARS, G.—Voyages Métallurgiques, ou Recherches et Observations sur les Mines et Forges de fer, la Fabrication de l'acier, celle du fer-blanc, et plusieurs mines de charbonne tene, faites depuis l'année 1757 jusques et compris 1769, en Allemagne, Suède, Norwege, Angleterre et Ecosse. [Sheffield, vol. i., p. 255. Middleton Tyas, vol. iii., p. 72.

Whitby, pp. 287-293], 3 vols., 4to. *Lyons*, vol. ii. *Paris*, 1780, vol. iii. *Paris*, 1781. German Ed. 4 vols. 8vo. *Berlin*, 1777.

1775.

- 1 HARGROVE, E.—The History of . . . Knaresborough. Ed. 2. [See under 1769].

1777.

- 1 MONRO, DONALD.—A Treatise on Mineral Waters. [See under 1770].
- 2 JARS, G.—Voyages Métallurgiques. [See under 1774].

1778.

- 1 ANON.—Sketch of a Tour into Derbyshire and Yorkshire, including part of Buckingham, Warwick, Leicester, Nottingham, Northampton, Bedford and Hertford-shires. [Harrogate springs, p. 141]. Pp. iv., 251. 8vo. *London*.

1779.

- 1 CHARLTON, L.—The History of Whitby and of Whitby Abbey. . . . [Account of Soils, Waste of Coast, Alum Works, pp. 305-360. Fossils, pp. 32, 353, 354]. 4to. *York*.

1780.

- 1 ALEXANDER, W.—Directions for the use of Harrowgate Waters. [See under 1773].
- 2 HUTTON, J.—[See under 1781].
- 3 JARS, G.—Voyages Métallurgiques. [See under 1774].
- 4 WALKER, ADAM.—[See T. West].
- 5 WEST, T.—A Guide to the Lakes in Cumberland, Westmoreland, and Lancashire. Addenda. Article vi., A Description of some natural curiosities in the Western edge of Yorkshire by ADAM WALKER (extracted from the *General Evening Post*, Sept. 25th, 1779), pp. 232-238. Article vii., A Tour to the caves in the West Riding of Yorkshire, pp. 238-270. Ed. 2. 8vo. *London*.

1781.

- 1 ANON.—Bemerkungen auf einer Reise durch verschiedene Thiele von England, Schottland, and Wales ; nebst einer Nebenreise in der Hölen von Ingleborough und Settle in

- Yorkshire. In Briefen Aus den Englischen nebst einigen Anmerkungen des Uebersetzers. Pp. 310. 8vo. *Leipzig*.
- 2 ELLIOT, J.—An Account of the Nature and Medicinal Virtues of the Principal Mineral Waters in Great Britain and Ireland; and those of most repute on the Continent. [Bilton, Harrogate, Knaresborough]. 12mo. *London*. Ed. 2. 12mo. *London*, 1789.
- 3 HUTTON, J.—A Tour to the Caves in the Environs of Ingleborough and Settle, in the West Riding of Yorkshire. With . . . Ed. 2. Pp. 100. 8vo. *London* [1st edition in 1780]. *Printed* as an appendix to 'A Guide to the Lakes,' in 1812.
- 4 JARS, G.—Voyages Métallurgiques. [See under 1774].
- 5 WATSON, R.—Chemical Essays. [Clitheroe limestone, vol. ii., pp. 197, 201-204. Harrogate waters, vol. iii. (1782), pp. 191-205. Lead ore, p. 313. Observations on the Sulphur Wells at Harrogate, vol. v. (1787), pp. 1-42]. 5 vols. 8vo. *Cambridge*.

1782.

- 1 HARGROVE, E.—The History of . . . Knaresborough, etc. [See under 1769].
- 2 WILLAN, R.—Observations on the Sulphur-Water at Croft, near Darlington. [Harrogate Water, pp. 19-25]. Pp. 56. 8vo. *London*. Ed. 2, under different title, 1786.

1784.

- 1 PENNANT, T.—Arctic Zoology. [Description of the Yorkshire Coast, pp. x.-xiii.]. 2 vols. 4to. *London*.
- 2 WALKER, J. An Essay on the Waters of Harrogate and Thorp-arch in Yorkshire; containing some Directions for their Use in Diseases. To which are prefixed Observations on Mineral Waters in general, and The Method of analysing them. Pp. viii., 208. 8vo. *London*.

1785.

- 1 COLLINS, G.—Great Britain's Coasting Pilot. [See under 1723].

1786.

- 1 BUCHAN, W.—Cautions concerning Cold Bathing, and drinking the Mineral Waters, being an Additional Chapter

to the Ninth Edition of his Domestic Medicine. [Harrogate, pp. 14, 16]. Pp. 20. 8vo. *London*. Numerous editions.

- 2 HARTLEY, T.—A concise account of some Natural Curiosities in the Environs of Malham, in Craven, Yorkshire. Pp. 68. Appendices, pp. 199. 8vo. *London*
- 3 TUKE, J.—Map of Holderness. Scale about 1 mile to  $\frac{3}{4}$  of an inch [with measurements of the distances between churches, etc., and the sea]. Inserted in Poulson's 'History of Holderness.'
- 4 [WATSON], R., Bishop of Llandaff.—Observations on the Sulphur Wells at Harrogate, made in July and August, 1785. *Phil. Trans.*, vol. lxxvi., pp. 171-188. *Chemical Essays*, vol. v., pp. 1-42 (1787).
- 5 WILLEN, R.—Observations on the Sulphur-Water at Croft, etc. [See under 1782].

## 1787.

- 1 ANON (signed E. H. and D. H. Letters *re* Devil's Arrows, etc., at Borough-bridge). *Gentleman's Magazine*. Part II. Pp. 564-5, and 659-60.
- 2 ANON [J. SCHOFIELD].—An Historical and Descriptive Guide to Scarborough and its Environs. The Spaw, pp. 21-30. Pp. viii., 192. 8vo, *York*.
- 3 ALEXANDER, W.—Directions for the use of Harrowgate Waters. [See under 1773].
- 4 ROOKE, H.—Some account of the Brimham Rocks in Yorkshire. *Archæologia*, vol. viii., pp. 209-217. Pls. xvi., xvii. Also 4to, reprint. *London*.
- 5 SCHOFIELD, J.—[See Anon.].
- 6 WATSON, R.—Of water in a solid state; of the best spring water; and of a probable cause of the impregnation of sulphureous waters. [Harrogate, pp. 193-205]. *Chemical Essays*, vol. iii., pp. 171-205.
- 7 — [See under 1781].

## 1788.

- 1 HADLEY, GEORGE.—A new and complete History of the Town and County of the Town of (sic) Kingston-upon-Hull [brief geological notes]. *Hull*. 4to. Pp. iv. + 898.

- 2 HIGGINS, B.—Synopsis of the Medicinal Contents of the Most Noted Mineral Waters, analysed by Dr. Higgins, at the instance of John Ellison. [First quantitative analysis. Harrogate, p. 13. Scarborough, p. 15]. Pp. 18. 8vo. *London*.
- 3 MARSHALL, W.—The Rural Economy of Yorkshire [Soils etc., p. 268. Hill shaded map]. 2 vols. 8vo. *London* Pp. 1-413 and 1-372. Another Ed., 1818.

## 1789.

- 1 ELLIOT, J.—An Account of the . . . Principal Mineral Waters in Great Britain. Ed. 2. [See under 1781].
- 2 HARGROVE, E.—The History of . . . Knaresborough, . . . etc. Ed. 4. [See under 1769].
- 3 WATSON, R.—Chemical Essays and Observations on the Sulphur Wells at Harrogate, Springs in Yorkshire]. 12mo.

## 1790.

- 1 ANON (signed T. H. and W. M. respectively).—The Devil's Arrows at Burrowbridge (sic) [two letters upon]. *Gentleman's Magazine*. Part ii., p. 1081 and p. 1196.
- 2 GARNETT, T.—Experiments and Observations on the Horley-Green Spaw, near Halifax. To which is added a Short Account of Two Other Mineral Waters in Yorkshire. [Redmire Spaw on Romald-Moors. and at Batley]. Pp. 86. 8vo. *Bradford*.

## 1791.

- 1 GARNETT, T.—Experiments and Observations on the Crescent Water at Harrogate. Pp. 69. 8vo. *Leeds*. See also under 1794.
- 2 SMEATON, J.—A Narrative of the Building and a Description of the Construction of the Edystone Lighthouse with Stone: with which is subjoined an appendix\* giving some account of the Lighthouse on the Spurn Point built upon a Sand. [Account of well, p. 190]. Fol. *London*. Ed. 2, 1813.

## 1792.

- 1 GARNETT, T.—A Treatise on the Mineral Waters of Harrogate, containing the History of the Waters, their Chemical

\* I have the original MS. and drawings for this section of the work.—T.S.



Analysis, Medicinal Properties and Plain Directions for their use. Pp. 168. 8vo. *Bradforth*. Ed. 2. Pp. xii., 163. 8vo. *Leeds*, 1794. Ed. 4, with appendix by J. JAQUES, *Leeds*, 1804. Ed. 5. 8vo. *Knaresborough*, 1810. Ed. 7. Pp. 224. 12mo. *Knaresborough*, 1822. Ed. 8 [1829].

1793.

- 1 ANON.—Topographical Description of Knaresborough. [Account of the Harrogate Spaws]. *Gentleman's Magazine*, vol. lxiii., pp. 689-670.

1794.

- 1 BROWN, R.—[See G. Rennie].
- 2 GARNETT, T.—A Treatise on the Mineral Waters at Harrogate. Ed. 2. [See under 1792].
- 3 LEATHAM, T.—General View of the Agriculture of the East Riding of Yorkshire and the Ainsty of the City of York, with Observations on the means of its improvement drawn up for the consideration of the Board of Agriculture and Internal Improvement. [Small map and account of soils]. Pp. 68. 4to. *London*.
- 4 RENNIE, G., R. BROWN, and J. SHIRREFF.—General View of the Agriculture of the West Riding of Yorkshire, with observations on the means of its improvement. [Map and account of soils]. Pp. 140. 4to. *London*. Ed. 2. 8vo. 1799.
- 5 SHIRREFF, J.—[See G. Rennie].
- 6 TUKE, J.—General View of the Agriculture of the North Riding of Yorkshire. . . . [Map and account of soils]. Pp. 120. 4to. *London*. Another Ed., 1800. 8vo. *London*.

1796.

- 1 ANON.—The Scarborough Guide (a second edition), to which is prefixed a descriptive route through Hull and Beverley. . . . [General Account of Scarborough Spaw Waters by Dr. BELCOMBE, pp. 53-59. Natural Productions by W. TRAVIS, pp. 113-119]. Pp. 178. 8vo. *Hull*. Ed. 1, 1787? Ed. 3, 1808.
- 2 BELCOMBE, —.—[See under 'Anon'].

- 3 BREWSTER, J.—The Parochial History and Antiquities of Stockton-upon-Tees. . . . Soils, pp. 104, 105. Pp. 176. 4to. *Stockton*. Ed. 2. 8vo. *Stockton*, 1829.
- 4 TICKELL, J.—The History of the Town and County of Kingston-upon-Hull, from its foundation in the Reign of Edward I. to the present time, with a description of the adjacent country. 4to. Pp. 940.
- 5 TRAVIS, W.—[See under 'Anon'].
- 6 OUTRAM, B.—Particulars of the Discovery of some very singular Balls of Stone, found in the Works of the Huddersfield Canal. [Limestone nodules in the tunnel at Pule Hill, near Marsden]. *Phil. Trans.*, vol. lxxxi., pp. 350-352.

1798.

- 1 BELCOMBE, —.—[See under T. Hinderwell].
- 2 HARGROVE, E.—The History of . . . Knaresborough, etc. Ed. 5. [See under 1769].
- 3 HINDERWELL, T.—The History and Antiquities of Scarborough and the Vicinity, with Views and Plans. [Alum Works, pp. 265, 266, 268. Fossils, by W. TRAVIS, pp. 213-215. Mineral Waters, by Dr. BELCOMBE, pp. 173, 182-191]. Pp. xi., 352. 4to. *York*. Ed. 2. 8vo. *London*, 1811. Ed. 3, by B. EVANS. 8vo. *Scarborough*, 1832.
- 4 TRAVIS, W.—[See under T. Hinderwell].

1799.

- 1 ALDERSON, J.—Geological Observations on the Vicinity of Hull and Beverley. *Journ. Nat. Phil. Chem. and Arts*, vol. iii., pp. 285-288.
- 2 BROWN, R.—[See G. Rennie].
- 3 CARY, G.S.—The Balnea: a description of all the popular watering places. 12mo.
- 4 GARNETT, THOMAS. Experiments and Observations at the Horley-Green-Spaw, near Halifax. To which is added a short account of two other mineral waters in Yorkshire. 8vo. Pp. 86
- 5 RENNIE, G.; BROWN, R.; and SHIRREFF, J.—General View of the Agriculture of the West Riding of Yorkshire. [See under 1794].

- 6 KIRWAN, R.—An Essay on the Analysis of Mineral Waters. [Discusses Dr. Garnett's analysis of Harrogate sulphur water, p. 137]. 8vo. *London*.
- 7 TENNANT, SMITHSON.—On different Sorts of Lime used in Agriculture. [Magnesian Limestone]. *Phil. Mag.*, vol. v., pp. 209-216; *Journ. de Phys.*, vol. li., pp. 156-163, 1800; also Geological Essays by A. Hunter. — Essay xix., vol. iv., pp. 371-385. 8vo. *York*, 1803.
- 8 SHIRREFF, J.—[See G Rennie].

1800.

- 1 HOUSMAN, J.—A Topographical Description of Cumberland Westmoreland, Lancashire and a part of the West Riding of Yorkshire; comprehending . . . [Map of soil as far east as Ilkley]. 8vo. *Carlisle*.
- 2 TENNANT, SMITHSON.—On Different Sorts of Lime used in Agriculture. [See under 1799].
- 3 TUKE, J.—General View of the Agriculture of the North Riding. Ed. 2? [See under 1794].
- 4 SAUNDERS, W.—A Treatise on the Chemical History and Medicinal Powers of some of the most celebrated Mineral Waters; with practical remarks on the aqueous regimen. [Harrogate, pp. 405-418], 8vo. *London*. Ed. 2, 1805.

1801.

- 1 ANON.—The History of Ripon. [See under 1806]

1803.

- 1 HUNTER, K.—[See under Smithson Tennant].
- 2 TENNANT, SMITHSON.—On different Sorts of Lime used in Agriculture. Also Geological Essays, by A. Hunter. [See under 1799].

1804.

- 1 GARNETT, T.—A Treatise on the Mineral Waters of Harrogate, with appendix by J. Jaques. [See under 1792].
- 2 JAQUES, J.—[See T. Garnett].
- 3 MILLER, E.—The History and Antiquities of Doncaster and its Vicinity. [Stone quarries, gypsum, minerals, etc., pp. 9-11]. 4to. *Doncaster*.
- 4 PARKINSON, J.—Organic Remains of a Former World. An

Examination of the mineralized remains of the Vegetables and Animals of the antediluvial World, generally termed extraneous fossils. [Yorkshire, vol. ii., pp. 17, 61, 169, 259]. 3 vols. 4to. *London*, 1804-11.

- 5 PENNANT, T.—A Tour from Alston Moor to Harrowgate and Brimham Crag. [Views of Brimham]. 4to. *London*.
- 6 SOWERBY, J.—British Mineralogy: or, coloured figures intended to elucidate The Mineralogy of Great Britain. 5 vols. 8vo. *London*, 1804-1807: Vol. i., 1804, Yorkshire, pp. 58, 65; vol. ii., 1806, Yorkshire, pp. 2\*, 7\*, 18\*, 19\*, 15, 49, 81; vol. iii., 1809, Yorkshire, pp. 35, 67, 95, 185; vol. iv., 1811, Yorkshire, pp. 47, 63; vol. v., 1817, Yorkshire, pp. 3, 13, 27, 75, 86.
- 7 SMITH, C.—A New Map of Yorkshire. [Scale about 3 miles to an inch).

#### 1805.

- 1 BLIGH, W.—A Survey of the Humber. From the Spurn to the Western end of Sunk Island in February, 1797. *Admiralty Chart*, 1805.
- 2 SANDERS, W.—A Treatise on the Chemical History . . . of . . . Mineral Waters. Ed. 2. [See under 1800].
- 3 PEACOCK, J.—Observations upon the Composition and Uses of the Water at the New Sulphur Baths at Dinsdale, near Darlington. 8vo. *London and Newcastle*, 1805 and 1829.
- 4 SHEFFIELD, W. E.—[See T. D. Whitaker].
- 5 WHITAKER, T. D.—The History and Antiquities of the Deanery of Craven in the County of York. Appendix ii., p. 12. Catalogue of Minerals found in Craven, by W. E. SHEFFIELD. 4to. *London*. Ed. 2. 1812. Ed. 3, 1878.

#### 1806.

- 1 ANON.—The History of Ripon: with descriptions of Studley-Royal, Fountains Abbey, Newby, Hackfall, etc., etc. An analysis of Aldfield Spaw and lists of Rare indigenous plants found in the neighbourhood. [Aldfield Spa and Brimham Rocks]. Ed. 2. Pp. 314. 12mo. *Ripon*. Ed. 1, 1801, does not refer to Aldfield.
- 2 AINSWORTH, W.—The Scarborough Guide (sic), (Edition 3), containing an accurate description of the Town, Castle,

and Environs; Dr. Belcombe's observations on The Spaw-Waters and Sea-Bathing; . . . [Spaw-Waters by W. BELCOMBE, pp. 21-29. Natural Productions by W. TRAVIS, pp. 94-103]. 16mo. *York*. Ed. 4. 16mo. *York*, 1811. Ed. 5. 12mo. *Scarborough* [1812?]. Ed. 7. 8vo. *Scarborough*, 1832. Ed. 8. 8vo. *Scarborough*, 1840.

- 3 BELCOMBE, W.—[See W. Ainsworth].
- 4 HUNTER, ADAM.—Lecture on the Sulphur Water of Harrogate. 8vo. *York*.
- 5 TRAVIS, W.—[See W. Ainsworth].
- 6 SOWERBY, J.—British Mineralogy, vol. ii. [See under 1804].

## 1807.

- 1 RIBBLESDALE, LORD.—Three Letters giving an Account of a Mine of Zinc Ore, found in caverns at Mallam Moors, and its application as a Paint. *Trans. Soc. Arts.*, vol. xxv., pp. 35-38

## 1808.

- 1 ANON.—The Scarborough Guide. Ed. 3. [See under 1796].
- 2 GRAVES, J.—The History and Antiquities of Cleveland. [Geology, pp. 71-80, and map]. 4to. *Carlisle*. Another Ed., 1846. 4to. *London*.
- 3 MARSHALL, W.—A Review of the Reports of the Board of Agriculture of England: comprising . . . [Account of soils, pp. 338, 430; Fossils, pp. 338, 434; Minerals, pp. 338, 436. Small map of northern counties showing main geological divisions]. 8vo. *York*.
- 4 RIBBLESDALE, LORD.—Account of a Mine of Zinc Ore, and its application as a Paint. [From a mineral found in caverns at Mallam Moors]. *Journ. Nat. Phil. Chem. Arts*, ser. 2, vol. xxi., No. 91, pp. 12-14. [See under Lord Ribblesdale, 1807].

## 1809.

- 1 CAYLEY, G.—Synoptical Tables, showing the component parts of the Principal Mineral Waters, collected from the Works of Doctor Saunders, Doctor Garnett, Mr. Peacock, of Darlington, and the late Mr. William Brunton of Ripon; with some observations addressed to the Medical Faculty and to the Public. 8vo. *Ripon*.

- 2 FORSTER, W.—A Treatise on a Section of the Strata commencing near Newcastle upon Tyne and concluding on the West Side of Cross Fell. With remarks on Mineral Veins in general. . . . To which are added Tables of the Strata in Yorkshire and Derbyshire. . . . [Swaledale, Cleveland]. Pp. 156. 8vo. *Newcastle*. Ed. 2. Pp. 422+xvi., 8vo. *Alston*, 1821. Ed. 3. Pp. lvi.+208 by W. NOLL. [? date]. 8vo. *Newcastle and London*.
- 3 HARGROVE, E.—A History of . . . Knaresborough, etc. Ed. 6. [See under 1769].
- 4 SOWERBY, J.—British Mineralogy. Vol. iii. [See under 1804].

1810.

- 1 FAREY, J.—On the supposed Fresh-water Origin of the Gypsum Strata in the Environs of Paris; on the Geological Characters and Relations of the Alum Shales on the Northern Coasts of Yorkshire. . . *Phil. Mag.*, vol. xxxv., pp. 256-261.
- 2 ——— A List of about Five Hundred Collieries in and near to Derbyshire. [Yorkshire Collieries working at this date]. *Ibid.*, pp. 431-438.
- 3 GARNETT, T.—A Treatise on the Mineral Waters of Harrogate. Ed. 5. [See 1792].
- 4 WINTER, R.—A mineralogical Outline of the District containing the Aluminous Schistus, in the County of York, with the entire Process practised in the Manufactory of Alum: to which is added an Analysis of the Sulphate of Alumine, and the Supersulphate of Alumine and Potash, with practical Observations and Remarks. [Analyses, and other minerals]. *Journ. Nat. Phil. Chem. Arts*, vol. xxv., No. 114, pp. 241-257.

1811.

- 1 AINSWORTH, W.—The Scarborough Guide. Ed. 4. [See under 1806]
- 2 FAREY, J.—A List of about 280 Mines of Lead—some with Zinc, Manganese, Copper, Iron, Fluor, Barytes, etc. in and near to Derbyshire. [Yorkshire, p. 107]. *Phil. Mag.*, vol. xxxvii., pp. 106-111.
- 3 ——— A List of about 700 Hills and Eminences in and near

to Derbyshire, with the Stratum which occupies the top of each, and other Particulars. [Many Yorkshire]. *Ibid.* Pp. 161-175, 443.

- 4 HINDERWELL, T.—The History and Antiquities of Scarborough. Ed. 2. [See under 1798].
- 5 SOWERBY, J.—British Mineralogy. Vol. iv. [See under 1804].

## 1812.

- 1 ANON (F. O. E.)—On Gypsum near Doncaster, and Nodules of Limestone, and of Pyrites containing Sea Shells in the Coal District near Bradford in Yorkshire. *Phil. Mag.*, vol. xxxix., p. 352.
- 2 AINSWORTH, W.—The Scarborough Guide. Ed. 5. [See under 1806].
- 3 BIGLAND, J.—The Beauties of England and Wales: or, Original Delineations, Topographical, Historical and Descriptive of each county. [Harrogate, vol. xvi., pp. 652-655; Boroughbridge, p. 665, etc.]. 8vo. *London*.
- 4 COOKE, G. A.—Topographical and Statistical Description of the County of York, containing an Account of its . . . Mines, Minerals . . . Being vol. xx. of 'The Modern British Traveller.' 16mo. *London*.
- 5 E., F. O.—[See 'Anon '].
- 6 FAREY, J.—An Account of the Great Derbyshire Denudation. [Yorkshire as far north as Wetherby. Small map showing faults]. *Phil. Mag.*, vol. xxxix., pp. 26-35.
- 7 ——— Geological Observations, in Correction of and Addition to the Paper on the Great Derbyshire Denudation, in our last, and the Report on Derbyshire, etc.; relating principally to Coal-measures near to the Chalk Strata; the Course of the 3rd and 4th Grit Rocks and Crowstone through Yorkshire, and the termination of its Coal-field Northward: the Limits of the Yellow Lime Rock, and the Existence of Red Marl, Gypsum Beds, Strontian, etc., between its Rocks, etc., etc. *Phil. Mag.*, vol. xxxix., pp. 93-106.
- 8 ——— (A Letter in reply to M. De Luc). [Plant remains in the Coal near Wakefield, p. 516]. *Monthly Mag.*, vol. xxxiii., pp. 513-517

- 9 HUTTON, J.—A Tour to the Caves . . . of Ingleborough.  
[See under 1781].
- 10 SOWERBY, J.—The Mineral Conchology of Great Britain.  
Vols. i., ii., iii., iv., 1812-1823, continued by J. D. C.  
SOWERBY; vols. v., vi., vii., 1825-1844. 7 vols. 8vo.  
*London*. Vol. i., 1812, Yorkshire, pp. 34, 88, 131, 132,  
210, 215; vol. ii., 1818, Yorkshire, pp. 9, 10, 86, 123;  
vol. iii., 1821, Yorkshire, pp. 41, 45, 119, 124, 145, 167;  
vol. iv., 1823, Yorkshire, pp. 12, 15, 16, 23, 40, 75, 146, 147;  
vol. v., 1825, Yorkshire, pp. 23, 36, 109, 119, 160; vol.  
vi., 1829, Yorkshire, pp. 49, 102, 116, 136, 162, 176, 182,  
195; vol. vii., 1840-1844, Yorkshire, pp. 14, 29, 45, 47,  
48, 65, 70, 71, 72.
- 11 STRICKLAND, H. E.—A General View of the Agriculture of  
the East Riding of York. [Small map showing four  
divisions]. Pp. iv., 332. 8vo. *York*.
- 12 [WEST, T.]—A Guide to the Lakes in Cumberland, West-  
moreland and Lancashire, by the author of the Antiquities  
of Furness. [See under Hutton, 1781].
- 13 WHITAKER, T. D.—The History . . . of Craven . . .  
[See under 1805].

## 1813.

- 1 FAREY, J.—Cursory Geological Observations lately made,  
in Shropshire, Wales, Lancashire, Scotland, Durham,  
Yorkshire N.R., and Derbyshire. Some Observations on  
Mr. Bakewell's Geological Map, and on the supposed  
Identity of the Derbyshire Peak and the Craven Lime-  
stone Rocks, etc., etc. *Phil. Mag.*, vol. xlii., pp. 53-59.  
See also, pp. 103-106, 121-126, 164-171, 246-261, 356-367.
- 2 GOUGH, J.—Observations on the Ebbing and Flowing Well  
at Giggleswick (sic), in the West Riding of Yorkshire, with  
a Theory of reciprocating Fountains. *Journ. Nat. Phil.  
Chem. Arts*, vol. xxxv., pp. 178-193; *Mem. Lit. Phil.  
Soc., Manchester*, ser. ii., vol. ii., pp. 354-383.
- 3 SMEATON, J.—A Narrative of the Building . . . of the  
Lighthouse on the Spurn Point. Ed. 2. [See under  
1791].
- 4 TOWNSEND, J.—The Character of Moses established for  
veracity as an Historian, recording events from the



Creation to the Deluge. [Geology mostly refers to South of England. Yorkshire, vol. i., pp. 155, 165, 279]. 2 vols. 4to. *Bath*. Vol. ii., 1815.

1814.

- 1 ANON (T. W. M.).—Letter on ‘Transition Rocks in Yorkshire.’ [The Wolds and Filey]. *Ann. Phil.*, vol. ii., pp. 148, 149.

1815.

- 1 ANON.—The New Harrogate Guide: Being a concise Description and History of what is most remarkable in that neighbourhood, for Antiquity, Elegance, or Rural Beauty: including Almas Cliff, Boroughbridge, Brimham Rocks, Hackfall, Knaresborough, Plumpton, etc. 12mo. Pp. 135. *Harrogate and Knaresborough*. Ed. 3, 1822. Ed. 5, 1828. Ed. 6, 1833.
- 2 FAREY, J.—Short Notices of Geological Observations made in the Summer of 1814, in the South of Yorkshire, and in North Wales, and of some Inferences therefrom, as to the Structure of England and Wales. *Phil. Mag.*, vol. xlv., pp. 161-177.
- 3 ——— An Alphabetical Arrangement of the places from whence Fossil Shells have been obtained, by Mr. James Sowerby, and drawn and described in vol. i., of his ‘Mineral Conchology’; with the geographical and Stratigraphical Situations of those Places, and a List of their several Fossil Shells, etc. *Ibid.*, vol. xlvi., pp. 211-224.
- 4 MURRAY, J.—An Analysis of the Mineral Waters of Dunblane and Pitcaithly; with general Observations on the Analysis of Mineral Waters, and the Composition of Bath Water and some others. [Harrogate, p. 487]. *Trans. Roy. Soc., Edinb.*, vol. vii., pp. 445-493; *Ann. Chim.*, t. xcvi., pp. 217-288; *Ann. Phil.*, vol. vi., pp. 256-269, 347-363; *Phil. Mag.*, vol. xlvi., pp. 264-278; *N. Journ. Pharm. Aerzt. Apoth. Chem.*, bd. ii., pp. 387-412 (1818).
- 5 SMITH, W.—A Delineation of the Strata of England and Wales, with parts of Scotland; exhibiting the Collieries and Mines, the Marshes and Fen Lands originally overflowed by the sea, and the Varieties of Soil according

to the variations in the substrata illustrated by the most descriptive names. Scale 5 miles to one inch.

- 6 SMITH, W.—Geological Table of British Organised Fossils which identify the courses and continuity of the Strata in their order of superposition as originally discovered by W. Smith, Civil Engineer, with reference to his Geological map of England and Wales.
- 7 ——— A Memoir to the Map and Delineation of the Strata of England and Wales, with part of Scotland. [General account of Yorkshire, pp. 33-35]. 4to. *London*.
- 8 STORER, J.—On an Ebbing and Flowing Well discovered by boring in the harbour of Bridlington. *Phil. Trans.*, vol. cv., part 1, pp. 54-59. *Phil. Mag.*, vol. xlv., p. 432.
- 9 TOWNSEND, J.—The Character of Moses, etc. [See under 1813].

1816.

- 1 ANON [N. J. WINCH].—Answer to the Geological Queries of a Constant Reader (in previous No., p. 12). [Refers to coal worked at Easingwold]. *Phil. Mag.*, vol. xlvii., pp. 100, 101.
- 2 ——— [F. KENDALL].—A Descriptive Catalogue of the Minerals, and Fossil Organic Remains of Scarborough and the Vicinity. 8vo. 317 pp. *Scarborough*.
- 3 HUME, ——— Analysis of the Water from the Ebbing and Flowing Stream discovered by boring in the Harbour at Bridlington, A.D. 1811, by Mr. Hume. *London*. December, 8vo. Pp. 8.
- 4 KENDALL, F.—[See 'Anon.']
- 5 STEVENSON, R.—Observations upon the Alveus, or General Bed of the German Ocean and British Channel. [Erosion of the Yorkshire Coast, pp. 479, 480]. *Mem. Wernerian Soc.*, vol. ii., for 1811-1816, pp. 464-490; *Ann. Phil.*, vol. viii., pp. 173-182.; *Phil. Mag.*, vol. xlix., pp. 414-419 (1817).
- 6 WHITAKER, T. D.—Ducatus Leodiensis, and Loidis and Elmete. History and Topography of Leeds and Parts adjacent. 2 vols. Folio.
- 7 WINCH, N. J.—[See 'Anon']

1817.

- 1 ANON.—Answers to the Geological Queries by N. J. Winch, Esq., with some Remarks, and further Queries proposed to that Gentleman, and other practical Investigators of the Strata of the North of England. [Coal and Lias limestone at Thirkelby]. *Phil. Mag.*, vol. xlix., pp. 250-256.
- 2 — The Tourist's Companion ; being a Concise Description and History of Ripon, Studley Park, Fountains Abbey, Hackfall, Brimham Crag, Boroughbridge, Aldborough, Newby Hall, Knaresborough, Plumpton, Harrogate, and Harewood House. [Harrogate, Analyses of waters, pp. 93-97 ; Devil's Arrows, pp. 59-62]. 16mo. *Ripon*. Ed. 3, 1822 ; Ed. 5, 1828 ; Ed. 6, 1833. Copyright purchased in 1841, and re-issued under new title. [See Anon (J. R. Walbran), 1841].
- 3 — The Ebbing and Flowing Stream in the Harbour of Bridlington, Yorkshire. *Phil. Mag.*, vol. xlix., p. 230.
- 4 — (W. S.).—On the Ebbing and Flowing Springs. *Ibid.*, vol. l., pp. 267-269.
- 5 BIRD, J.—[See G. Young.].
- 6 INGLIS, G.—On the Cause of Ebbing and Flowing Springs [Bridlington]. *Ibid.*, pp. 81-83.
- 7 MURRAY, —.—[Sulphate of Strontia in the banks of the Nidd, near Knaresborough]. *Trans. Geol. Soc.*, vol. iv., p. 445.
- 8 SMITH, W.—Stratigraphical System of Organized Fossils, with reference to the specimens of the Original Geological Collection in the British Museum, explaining their state of preservation and their use in identifying the British Strata. [Whitby, pp. 55, 56]. Pp. i., 118. 4to. *London*.
- 9 SOWERBY, J.—British Mineralogy. Vol. v. [See under 1804].
- 10 STEVENSON, R.—Observations upon the . . . bed of the German Ocean, etc. [See under 1816].
- 11 SUTCLIFFE, J.—A Short Introduction to the Study of Geology ; comprising a new theory of the elevation of the mountains, and the stratification of the earth : in which

the Mosaic Account of the Creation and the Deluge is vindicated. [Yorkshire, pp. 19, 22, 31, 38, 39]. 8vo. *London*.

- 12 YOUNG, G.—A History of Whitby and Streonshalh Abbey, with a statistical Survey of the vicinity to the distance of Twenty-five Miles. [Mineralogy mostly by J. BIRD, vol. ii., pp. 769-792]. 2 vols. 4to. *Whitby*.

1818.

- 1 ANON, W. S.—Live Lizard found imbedded in a seam of coal.—Fossil Tree.—Fossil Plants. [Near Wakefield]. *Phil. Mag.*, vol. lii., pp. 377, 378.
- 2 BIRD, J.—[See G. Young].
- 3 BREWERTON, T. LE GAY.—A Treatise on the Mineral Waters of Askern including a Description of the Village, History of the Spaws, etc. Pp. iii., 144. 8vo. *Doncaster*.
- 4 FITTON, W. H.—[A review of the Geological Map and other works of William Smith]. *Edin. Rev.*, Feb., 1818. Vol. xxix., pp. 311-337. See also 1832.
- 5 HARGROVE, W.—History and Description of the Ancient City of York; comprising all the most interesting information, already published in Drake's Eboracum; enriched with much entirely new matter, from other authentic sources, and illustrated with a Neat Plan of the City, and many Elegant Engravings. [Account of the old waterworks, vol. ii., p. 452]. 2 vols. 8vo. *York*.
- 6 MARSHALL, W.—The Review and Abstracts of the County Reports of the Board of Agriculture from the several agricultural departments of England. 8vo. *York*.
- 7 ——— [See 1788].
- 8 MURRAY, J.—An Analysis of . . . Mineral Waters. . . . [See under 1815].
- 9 SOWERBY, J.—The Mineral Conchology of Great Britain. Vol. i. [See under Sowerby, J., 1812].
- 10 STEINHAUER, H.—On Fossil Reliquia of unknown Vegetables in the Coal Strata. [Leeds, Bradford, Low Moor; pp. 269-273, 293]. *Trans. American Phil. Soc.*, vol. i., pp. 265-297.
- 11 YOUNG, G., and J. BIRD.—Geological and Mineralogical Survey of Part of the Yorkshire Coast. Drawn up by


Rev. G. Young, from Materials chiefly furnished by Mr. J. Bird. *Phil. Mag.*, vol. li., pp. 206-214.

## 1819.

- 1 BIGLAND, JOHN.—A Topographical and Historical Description of the County of York [being part of the work lately completed, 'The Beauties of England and Wales']. London. 8vo. Pp. viii. + 958.
- 2 FAREY, J.—On the Importance of knowing and accurately discriminating Fossil-Shells, as the means of identifying particular Beds of the Strata, in which they are inclosed : with a list of 279 Species or Varieties of Shells, of which the several Stratigraphical and Geographical Localities are mentioned. . . . [A few Yorkshire species]. *Phil. Mag.*, vol. liii., pp. 112-132.
- 3 ——— Free Remarks on the Geological Work of Mr. Greenough. [Speeton Cliffs, p. 129]. *Ibid.* Vol. liv. Pp. 127 132.
- 4 ——— A Stratigraphical or Smithian Arrangement of the Fossil Shells, which were described (in Latin) by Martin Lister in 1678, in the 3rd Tract of his 'Historiæ Animalium Angliæ,' occupying there 78 pages of very small quarto, with 4 plates, containing 64 Figures of Shells. *Ibid.* Pp. 133-138.
- 5 HUNTER, ADAM.—An Essay on Two Mineral Springs recently discovered at Harrogate ; and on the Springs of Thorpe-arch and Ilkley ; including the history, chemical analysis, and medicinal properties of these waters, with some observations on their use. Pp. iv., 134. 8vo. Leeds and London.
- 6 MACKENZIE, P.—Practical Observations on the Medical Powers of the most celebrated Mineral Waters, and of the various modes of Bathing. Pp. 151. 12mo. London.
- 7 YOUNG, G.—[Letter, on] the Discovery of Fossil Remains [*Ichthyosaurus* ?] near Whitby. (Geol. Soc.), *Ann. of Phil.* Vol. xiii. P. 379.

## 1820.

- 1 ANON.—Aire and Calder Canal. An Act to enable the Aire and Calder Navigation to make a Canal from Knottingley to Goole.

- 2 SCUDAMORE, C.—A Chemical and Medical Report of the Properties of the Mineral Waters of Buxton, Matlock, Tunbridge Wells, Harrogate, Bath, Cheltenham, Leamington, Malvern, and the Isle of Wight. [Harrogate, pp. 90-126]. Pp. ix., 265. 8vo. *London*. Ed. 2. Under different title. Pp. xi., 215. 8vo. *London*.
- 3 SMITH, W.—A New Geological Map of England and Wales with the Inland Navigations; exhibiting the districts of Coal and other Sites of Mineral Tonnage. Scale about 12 miles to one inch. Another Ed., 1828. Scale 15 miles to one inch.
- 4 STEVENSON, R.—On the Bed of the German Ocean or North Sea. [Shoaling of the sea]. *Edin. Phil. Trans.*, vol. iii., pp. 42-56, map; *Mem. Wernerian Soc.*, vol. iii., pp. 314-336 (1821).
- 5 WILLIAMS, J. W.—An Essay on the Utility of Sea Bathing, In preserving Health, and as a Remedy in Disease. . . . Also Observations on Mineral Waters, Natural and Artificial. [Harrogate, p. 221]. 12mo. *Portsmouth*.  
1821.
- 1 FORSTER, W.—A Treatise on a Section of the Strata . . . near Newcastle-upon-Tyne. Ed. 2. [See under 1809].
- 2 HARGROVE, E.—A History of . . . Knaresborough, etc. [See under 1769].
- 3 JEFFERSON, J. B.—The History of Thirsk; including an account of its once celebrated Castle, Topcliffe, Byland, and Rievaulx Abbey, etc., etc. [Alludes to fossils, etc., p. 70]. 8vo. *Thirsk*.
- 4 MILLER, J.—Practical Observations on Cold and Warm Bathing, and descriptive notices of Watering Places in Britain. 12mo. *London*.
- 5 MILLER, J. S.—A Natural History of the Crinoidea or Lily-shaped Animals, with observations on the genera *Asteria*, *Euryale*, *Comatula*, *Marsupites*, illustrated with Fifty coloured plates. [Yorkshire species, pp. 68, 95, 116]. 4to. *Bristol*.
- 6 SMITH, W.—Geological Map of Yorkshire.  4 sheets. Scale about  $2\frac{3}{4}$  miles to one inch.

- 7 SOWERBY, J.—The Mineral Conchology of Great Britain. Vol. iii. [See under 1812].
- 8 STEVENSON, R.—[See 1820].
- 9 THOMPSON, T.—Ocellum Promontorium ; or, short Observations on the ancient state of Holderness, with Historic Facts relative to the sea port or market town of Ravenspurne in Holderness. [Coast erosion]. Pp. 286. 8vo. *Hull*.
- 10 WINCH, N. J.—Observations on the Eastern Part of Yorkshire: *Trans. Geol. Soc.*, vol. v., pp. 545-557.
- 11 YOUNG, G.—Account of a Singular Fossil Skeleton discovered at Whitby. [*Ichthyosaurus communis*]. *Mem. Wernerian Soc.*, vol. iii., p. 450.

## 1822.

- 1 ANON.—Fossil Remains. [Atwick, near Hornsea]. *Phil. Mag.*, vol. lx., p. 154.
- 2 ——— Knaresborough Spaw. [Comparison of Dr. Murray's analysis of Knaresborough Spaw and Dr. Scudamore's analysis of the Sulphur Water of Low Harrogate]. 4to. *Knaresborough*.
- 3 ——— The New Harrogate Guide. Ed. 3. [See 1815].
- 4 ——— The Tourist's Companion. Ed. 3. [See under 1817].
- 5 ——— Note recording Elephant tusk at Atwick. *Gentleman's Magazine*. Part 1, p. 545.
- 6 ——— Note recording the discovery of the cave near Kirkdale church. *Gentleman's Magazine*, part 1, p. 161.
- 7 BIRD, J.—[See G. Young].
- 8 BUCKLAND, W.—Account of an Assemblage of Fossil Teeth and Bones, of Elephant, Rhinoceros, Bear, Tiger and Hyæna, and sixteen other Animals, discovered in a cave at Kirkdale, Yorkshire, in the year 1821 ; with a Comparative View of five similar Caverns in various parts of England, and others on the Continent. *Phil. Trans.*, vol. cxii., pp. 171-236 ; *Ann. Phil.*, ser. 2, vol. iv., pp. 133-145, 173-194 ; *Journ. de Phys.*, vol. xcvi., pp. 220-245, 308-330 ; *Floriep. Notizen*, vol. ii., 1822, col. 164-168 ; *Edin. Phil. Journ.*, vol. viii., pp. 56-62, vol. ix., pp. 221-228 ; *Gentleman's Magazine*, part 1, pp. 352, et. seq.

- 9 CONYBEARE, W. D., and W. PHILLIPS.—Outlines of the Geology of England and Wales with an introductory compendium of the general principles of that Science, and comparative views of the Structure of Foreign Countries. [Many Yorkshire references]. 8vo Part 1. *London*.
- 10 GARNETT, T.—A Treatise on the Mineral Waters of Harrogate. Ed. 7. [See under 1792].
- 11 GIBSON, J.—Organic Remains, Kirkdale, near Kirkby Moorside. *Yorkshire Gazette*, March 9th.
- 12 PARKINSON, J.—An Introduction to the study of Fossil Organic Remains. . . . [Yorkshire, pp. 98, 287, 328-333]. 8vo. *London*.
- 13 PHILLIPS, W.—[See W. D. Conybeare].
- 14 THOMPSON, THOS.—A map of Holderness, 1822. [Inserted in his Ocellum Promontorium, 1824, which see].
- 15 WINCH, N. J.—On Blocks of Granite, Syenite, etc., imbedded on Diluvium. [Inquiry as to cause of these erratics]. *Ann. Phil.*, n. ser., vol. iii., p. 373.
- 16 ——— On the Geology of the Eastern Part of Yorkshire. *Ibid.*, p. 374. Replies, vol. iv., pp. 247, 339.
- 17 YOUNG, G., and J. BIRD.—A Geological Survey of the Yorkshire Coast. 4to. *Whitby*. Ed. 2. 1828.

1823.

- 1 ANON.—Account of the Great Cave of Gailenreuth in Franconia, and of the Cave at Kirkdale in Yorkshire. [Mentions several other caves and fissures in the Oolites of Yorkshire]. *Edin. Phil. Journ.*, vol. viii., pp. 56-62.
- 2 ——— Account of the Caves at Kirkby Moorside and the open fissure in Duncombe Park, with notices of other Caves in England. [Quoted from *Reliquiæ Diluvianæ*]. *Ibid.*, vol. ix., pp. 221-228.
- 3 BUCKLAND, W.—*Reliquiæ Diluvianæ*; or, Observations on the Organic Remains contained in Caves, Fissures, and Diluvial Gravel, and on other Geological Phenomena, attesting the action of an Universal Deluge. [Kirkdale, pp. 1-51; Kirkby Moorside, pp. 51-54; Duncombe Park, pp. 54-56]. 4to. *London*. Ed. 2, 1824.
- 4 CALVERT, M.—An Account of the Knaresborough Spaw; with an Analysis of the water, and some general observations



- on its medicinal qualities and effects. 16mo. *Knaresborough*. Ed. 2. Pp. 32, 1831. Ed. 3. Pp. 40, 1836.
- 5 CUMBERLAND, G.—On the Origin of the Accumulation of Bones in the Caves of the Vale of Pickering, in Yorkshire and other Places. *Ann. Phil.*, ser. 2, vol. v., pp. 127-129.
  - 6 FAREY, J.—On the unconformable Position of the Pontefract Rock of Sandstone, with respect to the subjacent Coal-measures, as shown in the new Geological Map of Yorkshire; and regarding some Errors therein as to parts of the Ranges of certain Rocks in the Coal Series. [Origin of Harrogate springs, p. 277]. *Ann. Phil.*, vol. v., pp. 270-278.
  - 7 GOODWILL, THOMAS.—Analysis of the water issuing from the Alum Rock near Guisborough, to which is added a Tabular View of the Composition of Mineral Waters in Great Britain. *Guisborough*. Pp. 26.
  - 8 SOWERBY, J.—The Mineral Conchology of Great Britain. Vol. 4. [See under 1812].
  - 9 WEST, W.—Analysis of a New Sulphur Spring at Harrogate. *Quart. Journ. Sci. Lit. Art.*, vol. xv., pp. 82-89.
  - 10 YOUNG, G.—On the Fossil Remains of Quadrupeds, etc. discovered at the Caverns at Kirkdale, in Yorkshire, and in other Cavities or Seams in Limestone Rocks. *Mem. Wernerian Soc.*, vol. iv., pt. 2, pp. 262-270.

## 1824.

- 1 ANON.—Disruption of a Bog in Yorkshire. [Crowhill, near Haworth]. *Phil. Mag.*, vol. lxiv., p. 229.
- 2 ATKINSON, J.—Sketch of the Geographical Distribution of Plants in Yorkshire [on the Magnesian Limestone between Knaresborough and Ripon]. *Mem. Wernerian Soc.*, vol. v., pt. 1, pp. 277-286, and *Phil. Mag.*, vol. lxiv., pp. 211-217.
- 3 BUCKLAND, W.—[See 1823].
- 4 COLE, J.—The Scarborough Repository and Mirror of the Season; consisting of biographical, historical and topographical subjects. . . . [Character of W. Smith by D'Aubisson, No. 4, p. 18; Gypsies, No. 8, p. 9]. Vol. i. 8vo. *Scarborough*.
- 5 D'AUBISSON.—[See J. Cole].

- 6 EASTMEAD, W.—*Historia Rievallensis*: containing the History of Kirkby Moorside . . . to which is prefixed a Dissertation on the Animal Remains and other curious Phenomena, in the recently discovered Cave at Kirkdale. [Minerals and Petrifications, pp. 456-463]. 8vo. *London*.
  - 7 ORDNANCE SURVEY MAP of England. Scale one inch to one mile. Sheets 85 and 86.
  - 8 PHILLIPS, R.—Analysis of the Argillaceous Iron Ore. [Bradford]. *Ann. Phil.*, ser. 2, vol. vii., pp. 448-450; vol. viii., p. 27.
  - 9 SMITHSON, J.—Some Observations on Mr. Penn's Theory concerning the Formation of Kirkdale Cave. *Ann. Phil.*, ser. 2, vol. viii., pp. 50-60.
  - 10 THOMPSON, T.—A History of the Church and Priory of Swine in Holderness. [Geology, pp. 244-251]. Pp. 268. 8vo. *Hull*.
  - 11 ——— *Ocellum Promontorium*; or, short observations on the ancient state of Holderness, with Historical Facts relative to the Sea port and Market town of Ravenspurn in Holderness. 8vo. *Hull*. Pp. 286 and map, dated 1822.
  - 12 YOUNG, G.—A Picture of Whitby and its Environs. [Kirkdale, pp. 283, 284; map showing dyke]. 8vo. *Whitby*. [2nd ed., 1840]
- 1825.
- 1 ANON. Strontites in Yorkshire. [Carbonate near Pateley Bridge, Sulphate near Knaresborough]. *Edin. Phil. Journ.*, vol. xii., p. 178.
  - 2 ARTIS, E. T.—Antediluvian Phytology, illustrated by a collection of the Fossil Remains of Plants, peculiar to the Coal Formations of Great Britain. Pp. xiii.+24. 4to. *London*.
  - 3 COLE, J.—Picture of Scarborough for the year 1825; forming a guide to that favourite watering place. [Stone from White Nab, p. 12; The Spa, pp. 42-56; Kirkdale Cave, pp. 78, 79]. Pp. 88. 8vo. *Scarborough*.
  - 4 ——— The Scarborough Album of History and Poetry. [Scarborough Spaw, pp. 26-36; Geological Notes, pp. 48, 59, 80; Filey Spaw, p. 85; Fossil Crocodile, p. 90; Kirkdale Cavern, pp. 97, 98]. Pp. 148. 8vo. *Scarborough*.

- 5 GEORGE, E. J.—[See J. D. C. Sowerby].
- 6 SEDGWICK, A.—On the Origin of Alluvial and Diluvial Formations. [East Yorkshire, pp. 243, 244]. *Ann. Phil.* ser. 2, vol. ix., pp. 241-257 ; vol. x., pp. 18-37. *Zeitschr. Min.*, 1827, pp. 53-67, 193-212.
- 7 ——— On Diluvial Formations. [Yorkshire, pp. 24-26]. *Ann. Phil.*, vol. x., pp. 18-37.
- 8 SOWERBY, J. D. C. and E. J. GEORGE.—Additional Observations upon a Fossil found in Coal-Shale, and the description of a Palate found in Coal near Leeds. *Zool. Journ.*, vol. ii., 22-24.
- 9 SOWERBY, J. D. C.—The Mineral Conchology of Great Britain. Vol. v. [See under 1812].
- 10 YOUNG, G.—Account of a Fossil Crocodile recently discovered in the Alum Shale near Whitby. [*Teleosaurus chapmanni*]. *Edin. Phil. Journ.*, vol. xiii., pp. 76-81 ; *Ann. Phil.*, ser. 2, vol. ix., p. 469.

## 1826.

- 1 FLEMING, J.—The Geological Deluge, as interpreted by Baron Cuvier and Prof. Buckland, inconsistent with the testimony of Moses and the Phenomena of Nature. [Vale of Pickering and Kirkdale]. *Edin. Phil. Journ.*, vol. xiv., pp. 205-239 ; *Zeitschr. Min.*, 1826, pp. 390-404 ; 1827, pp. 430-448 ; (Hft. 2), pp. 363-400.
- 2 MARSHALL, W.—Notice on Carbonate of Copper occurring in the Magnesian Limestone, at Newton Kyme, near Tadcaster. [Also at Farnham]. *Trans. Geol. Soc.*, ser. 2, vol. ii., pp. 140-141.
- 3 SEDGWICK, A.—On the Classification of the Strata which appear on the Yorkshire Coast. *Ann. Phil.*, ser. 2, vol. xi., pp. 339-362.
- 4 ——— On the Phenomena connected with some Trap Dykes in Yorkshire and Durham. *Phil. Mag.*, vol. lxxvii., pp. 211-219, 249-259 ; *Trans. Cambridge Phil. Soc.*, vol. ii., pp. 21-44.
- 5 STARK, J.—Notice regarding the Discovery of Live Cockles in a Peat Moss at a great distance from the sea. [Near Greta Bridge on the Tees]. *Edin. Journ. Sci.*, vol. iv., pp. 142-147.

- 6 VERNON, W.—An Account of the Strata north of the Humber, near Cave. [Small geological map]. (York Phil. Soc.). *Ann. Phil.*, new ser., vol. xi., pp. 435-439.
- 7 WAINWRIGHT, J., Yorkshire.—An Historical and Topographical View of the Wapentake of Strafford and Tickhill . . . [Account of Hatfield Chase, peat, etc., pp. liv.,-lxxii.]. 4to. *Sheffield*.
- 8 WITHAM, H.—Notice in regard to the Trap Rocks in the Mountain Districts of the West and North-West of the Counties of York . . . *Mem. Wernerian Nat. Hist. Soc.*, vol. v., pt. 2, pp. 475-480.
- 9 ——— Notice of the occurrence of the Common Cockle in a living state at Cocklesbury in Yorkshire, at a great distance from the sea, and much above its present level. [Near Greta Bridge]. *Ibid.*, p. 577.
- 10 ——— On the Discovery of live Cockles in a Peat Moss distant from the sea. *Ann. Phil.*, ser. 2, vol. xi., pp. 464-467.

1827.

- 1 ANON.—The Stranger's introduction to Harrogate; containing a variety of useful information, relating to the accommodation, the recreations and the different Mineral Waters of this celebrated watering place. [Table of analyses]. Ed. 4, Pp. 52, 12mo, *Leeds*.
- 2 ——— Note recording important discovery of Fossil Plants in Grysthorpe (sic) Bay. *Gentleman's Mag.*, pt. 2, p. 449.
- 3 ——— Note recording 'horns' and bones of a 'large animal of the deer kind,' at Skipsea. *Gentleman's Magazine*, part 1, p. 160.
- 4 COLE, J.—The Scarborough Souvenir. [Account of Mr. Smith's scheme for supplying the town with water]. 8vo. *Scarborough*.
- 5 FLEMING, J.—[See 1826].
- 6 GEORGE, E. S.—Analysis of a Sulphuretted Water from the Northern Part of the Yorkshire Coalfield. [Similarity of the water to some at Harrogate]. *Phil. Mag.*, ser. 2, vol. 1., pp. 245-248.
- 7 PHILLIPS, J.—On the direction of the Diluvial Currents in Yorkshire. *Phil. Mag.*, vol. ii., pp. 138-141.

- 8 SEDGWICK, A.—On the Association of Trap Rocks with the Mountain Limestone Formation in High Teesdale, *Trans. Cambridge Phil. Soc.*, vol. ii., pp. 139-195.
- 9 ——— On some beds associated with the magnesian limestone, and on some fossil fish found in them. *Proc. Geol. Soc.*, vol. i., pp. 2, 3.
- 10 ——— [See 1825].
- 11 SMITH, W.—On retaining Water in Rocks for Summer Use. [Scarborough, Kellaways Rock]. *Phil. Mag.*, ser. 2, vol. i., pp. 415-417.
- 12 TREVELYAN, W. C.—On the live Marine Cockles said to have been found at a great distance from the Sea in Yorkshire. *Edin. New Phil. Journ.*, vol. v., pp. 311-317.
- 13 WEST, W.—Analysis of a newly-discovered Spring at Stanley, near Wakefield. *Quart. Journ. Sci. Lit. Art*, ser. 2, vol. ii., pp. 21-25.

## 1828.

- 1 ANON.—The New Harrogate Guide. Ed. 5. [See 1815].
- 2 ——— The Tourist's Companion. Ed. 5. [See under 1817].
- 3 AIRE AND CALDER CANAL. An Act to enable the Aire and Calder Navigation to make certain cuts and canals.
- 4 ALLEN, T.—A New and Complete History of the County of York. [Soil, vol. i., pp. 131-135; Mineralogy, Geology, etc., pp. 160-170; Harrogate, vol. iii., pp. 404-407; Boroughbridge, pp. 409-410; Knaresborough, p. 401]. 3 vols. 4to. London. 1828-1831. An 8vo. edition also issued. Vol. i. (pp. 359), 1829; vol. ii. (pp. 431), 1831; vol. iii. (pp. 443), 1831; vol. 4 (pp. 532), 1831; vol. 5 (pp. 488), 1831; vol. vi. (pp. 404), 1831.
- 5 BRONGNIART, A.—Histoire des Végétaux Fossiles, ou Recherches Botaniques et Géologiques sur les Végétaux renfermés dans les diverses couches du globe. [Yorkshire, pp. 115-118, 123, 127, 130, 131, 135, 167, 168, 177, 186, 189, 202, 219, 225, 263, 301, 304, 321, 324, 358, 360, 372-377]. 2 vols. 4to. Paris, vol. i., pp. 488; vol. ii., 1837, pp. 72.
- 6 COLE, J.—History and Antiquities of Filey. [Account of the Spa, p. 117]. 8vo, Scarborough.
- 7 INCHBOLD, T.—Harrogate and its Environs, illustrated by

- a series of lithographic views. [History of the springs].  
Pp. 79, 8vo. *Leeds*.
- 8 MURRAY, P.—Account of a Deposit of Fossil Plants, discovered in the Coal Formation, near Scarborough. [Gris-  
thorpe Plant-bed]. *Edin. New Phil. Journ.*, vol. v.,  
pp. 311-317.
- 9 NIXON, F.—Heights of some of the principal Beds of  
Ingleborough Hill and Moughton Fell, Yorkshire. *Phil.*  
*Mag.*, ser. 2, vol. iii., pp. 11-14.
- 10 ——— On the Measurement by Trigonometry of the Heights  
of the principal Hills in the Vicinity of Dent, Hawes, and  
Sedbergh, in Yorkshire. *Ibid.*, pp. 28-95, 189-203.
- 11 PHILLIPS, J.—Remarks on the Geology of the North Side  
of the Vale of Pickering. *Phil. Mag.*, vol. iii., pp. 243-249.
- 12 ——— Geological Observations made in the Neighbourhood  
of Ferrybridge, in the years 1826-1828. [Sandstone  
pebbles in the Drift, similar to the rock at Harrogate and  
Ripley, p. 405]. *Phil. Mag.*, ser. 2, vol. iv., pp. 401-409.
- 13 ROBINSON, J. W.—Whitby Spaw. *The Whitby Panorama*,  
June, pp. 180-182; July, pp. 209-212; also *The Whitby*  
*Magazine*, vol. ii., pp. 162-166.
- 14 SMITH, W.—[See 1820].
- 15 WALKER, T. D.—An analysis of the waters of Dinsdale and  
Croft, with practical observations on their medicinal  
powers . . . . Ed. 2. Pp. xv., 178. 16mo. *Durham*.  
Ed. 3. 12mo. *Darlington*, 1835.
- 16 YOUNG, GEO.—On the Fossil Remains of Quadrupeds, etc.,  
discovered in the Caverns at Kirkdale, in Yorkshire, and  
in the Cavities or Seams in Limestone Rocks. *The*  
*Whitby Panorama*, vol. ii., Jan., pp. 11-16; Feb., 33-39.
- 17 ——— [See 1822].
- 1829.
- 1 ANON, (L. E. O.)—Granite found north of the Humber.  
[Found in sinking a well near Woodend, about eight  
miles from the Hambleton Hills, at a depth of 60 or 70  
yards]. *Mag. Nat. Hist.*, vol. i., pp. 396, 397.
- 2 ——— W. C. T[aylor]—The Granite in Yorkshire. [States  
that the above is only a boulder]. *Ibid.*, vol. ii., p.  
120.
- 3 ALLEN, T.—[See 1828].

- 4 BREWSTER, J.—The Parochial History and Antiquities of Stockton-upon-Tees . . . Appendix II., by J. HOGG. On the Natural History of the Vicinity of Stockton-on-Tees. [Observations on Geology, pp. 69-94]. 8vo. *Stockton*. [See under 1796].
- 5 COLE, J.—The Scarborough Natural Historians; or, a visit to that celebrated Watering-place. [Minerals and Fossils, pp. 12-16, 37-47, 50, 56]. Pp. 70. 8vo. *Scarborough*.
- 6 ——— Historical Sketches of Scalby, Burniston, and Cloughton, with descriptive notices of Hayburn Wyke, and Stainton Dale, in the County of York. [Magnetic iron sand and Elephant's tooth near Scalby Mill, p. 52. Scalby building stone, p. 64. Petrifying Springs and Strata at Cloughton Wyke, pp. 64-67]. Pp. 91. 8vo. *Scarborough*.
- 7 GARNETT, T. A.—Treatise on the Mineral Waters at Harrogate. Ed. 8. [See under 1792].
- 8 HOGG, J.—[See J. Brewster].
- 9 LINDLEY, J.—An account of a remarkable fossil plant in the coal-formation of Yorkshire. [*Tricomanes rotundatum*]. *Proc. Geol. Soc.*, vol. i., p. 137.
- 10 NIXON, J.—On the Measurement (by Trigonometry) of the Heights of the Principal Hills of Wensleydale, Yorkshire. *Phil. Mag.*, ser. 2, vol. v., pp. 350-362, 431-441.
- 11 OLIVER, GEORGE.—The History and Antiquities of the Town and Minster of Beverley, etc. 4to. Pp. 575
- 12 OSANN, E.—Physikalisch—medizinische Darstellung der bekannten Heilquellen der vorzüglichsten Länder Europa's. [Harrogate Eisenwasser, vol. i., p. 349; Schwefelwasser, p. 350]. 2 vols. 8vo. *Berlin*. Ed. 2. 3 vols. 8vo. *Berlin*. 1839-1843.
- 13 PEACOCK, J.—Observations upon the . . . water . . . at Dinsdale. [See under 1805].
- 14 PHILLIPS, J.—Illustrations of the Geology of Yorkshire; or, a Description of the Strata and Organic Remains; accompanied by a Geological Map, Sections, and Plates of the Fossil Plants and Animals. Part 1. The Yorkshire Coast. [Central Yorkshire. 3rd Ed., pp. 1-23].

- 4to. *York*, 1829. Ed. 2. 4to. *London*, 1835. Ed. 3.  
By R. ETHERIDGE. 4to. *London*, 1875.
- 15 PHILLIPS, J.—On a Group of Slate Rocks ranging E.S.E. between the rivers Lune and Wharfe, from near Kirkby Lonsdale to near Malham; and on the attendant Phænomena. *Trans. Geol. Soc.*, ser. 2, vol. iii., pp. 1-20.
- 16 POULSON, GEORGE.—Beverlac: the History and Antiquities of the Town of Beverley. 2 vols. Roy. 8vo. Pp. 734 and 84.
- 17 SEDGWICK, A.—On the Geological Relations and Internal Structure of the Magnesian Limestone, and the lower Portions of the New Red Sandstone Series in their Range through Nottinghamshire, Derbyshire, Yorkshire and Durham to the Southern Extremity of Northumberland. *Trans. Geol. Soc.*, ser. 2, vol. iii., pp. 37-124, 239; *Phil. Mag.*, ser. 2, vol. i., pp. 229-231 (1827). [Long abstract in *Proc. Geol. Soc.*, vol. i., pp. 63-66 (1827)].
- 18 SOWERBY, J. and J. D. C.—The Mineral Conchology of Great Britain. [See under 1812].
- 19 [TAYLOR], W. C.—[See Anon].
- 20 VERNON, W. V.—Analysis of an aluminous Mineral in the Collection of the Yorkshire Philosophical Society. [Scarbroite]. *Phil. Mag.*, ser. 2, vol. v., pp. 178-180.
- 21 ——— On the Discovery of Fossil Bones in a Marl-pit near North Cliff. *Ibid.*, vol. vi., pp. 225-232.

1830.

- 1 BOOTH, A.—A Treatise on the Natural and Chymical Properties of Water, and on various British Mineral Waters. Pp. 196, 12mo. *London*. Another Ed., Pp. xii., 196, 12mo. *London*, 1838.
- 2 DAUBENY, C.—Réflexions Chimico-Géologiques sur les Eaux Minérales et leur origine, suggérées par la Lecture de deux ouvrages, celui de M. Scudamore, sur les Eaux de Buxton, Matlock, etc., et celui de M. Le D. G. Bishof, sur les sources volcaniques, etc. [Discusses Scudamore's work on Harrogate Waters]. *London Review*, No. 2, May 1829; *Journ. Geol.*, t. ii., pp. 113-136.



- 3 DE LA BECHE, H.—Sections and Views illustrative of Geological Phenomena. [General vertical section of Yorkshire Strata]. 4to. *London*.
- 4 DODSON, T.—Practical Observations upon the History, Contents, and Medicinal Properties of Ilkley Fountain. 8vo. *Skipton*.
- 5 HUGILL, J.—An Address to the Inhabitants of Whitby and its Vicinity, showing the present declining state of the town . . . , with a practical and easy plan for forming a company to ascertain, by sinking a boring, whether there is a bed of coal under our Alum Rock ; pointing out the most likely places . . . Pp. 70. 8vo. *Whitby*.
- 6 HUNTER, ADAM.—A Treatise on the Mineral Waters of Harrogate and its Vicinity. Pp. vii., 138, 12mo. *London*. Ed. 3. Pp. vii., 138, 1833. Ed. 4, 1834. Ed. 5. Pp. ix., 196, 1838. Another Ed., 1846.
- 7 HUNTER, J.—The Diary of Ralph Thoresby, Author of the topography of Leeds (1677-1724), now first published from the original manuscript. [Devil's Arrows at Boroughbridge, vol. i., p. 432]. 2 vols. 8vo. *London*.
- 8 LYELL, C.—Principles of Geology, being an attempt to explain the former changes of the Earth's Surface, by reference to causes now in operation. [Yorkshire, pp. 96, 266]. Pp. xv., 511 ; xii., 330. 2 vols. 8vo. *London*. 1830-32. Ed. 2, 1832. Ed. 3, 1834. Ed. 4, 1835. Ed. 5, 1837. Ed. 6, 1840. Ed. 7, 1847. Ed. 8, 1850. Ed. 9, 1853. Ed. 10, 1867. Ed. 11, 1872. Ed. 12, 1875.
- 9 NIXON, J.—On the Measurement (by Trigonometry) of the Heights of the Principal Hills of Swaledale, Yorkshire. *Phil. Mag.*, ser. 2, vol. viii., pp. 1-12, 120-128, 188-195.
- 10 VERNON, W. V.—Further Examination of the Deposit of Fossil Bones at North Cliff in the County of York. *Phil. Mag.*, ser. 2, vol. vii., pp. 1-9.
- 11 WOODWARD, S.—A Synoptical Table of British Organic Remains : in which all the edited British Fossils are systematically and stratigraphically arranged, in accordance with the views of the geologists of the present day ; and a reference given to their localities, strata, and engraved figures. [Many Yorkshire specimens]. Pp. 50. 8vo. *London*, and 4to. *London and Norwich*.

1831.

- 1 ANON (T. E. L.).—A Sketch of the Flora of Richmond, Yorkshire, as compared with that of Thirsk in the same County. [Marl and Lias of the Vale of York]. *Mag. Nat. His.*, vol. iv., pp. 24-28, 276, 467.
- 2 ALLEN, T. [See 1828 and 1829].
- 3 CALVERT.—[See G. Neale, 1734].
- 4 CALVERT, M.—[See 1823].
- 5 DE LA BECHE, H. T.—A Geological Manual. Pp. xii., 535. 12mo. *London*. Ed. 2, 1832. Ed. 3, 1833. French editions in 1833 and 1837.
- 6 DUNN, J.—On a large species of Plesiosaurus in the Scarborough Museum. [From the Upper Lias near Whitby]. *Proc. Geol. Soc.*, vol. i., pp. 336, 337.
- 7 HUTTON, W.—[See J. Lindley].
- 8 LINDLEY, J. and W. HUTTON.—The Fossil Flora of Great Britain; or, Figures and Descriptions of the Vegetable Remains found in a fossil state in this country. [Many Yorkshire species]. 3 vols. 8vo. *London*. Vol. i., 1831-33; vol. ii., 1833-35; vol. iii., 1837.
- 9 MURCHISON, R. T.—Notes on the Secondary Formations of Germany, as compared with those of England. *Proc. Geol. Soc.*, vol. i., pp. 325-331.
- 10 PHILLIPS, J.—On some effects of the atmosphere in wasting the surfaces of buildings and rocks. [Brimham Crags and Devil's Arrows]. *Proc. Geol. Soc.*, vol. i., pp. 323, 324.
- 11 ——— An extemporaneous account of the most remarkable phenomenon in the Geology of Yorkshire. *Rep. Brit. Assoc.*, for 1830, p. 56.
- 12 SEDGWICK, A.—A description of longitudinal and transverse sections through a portion of the carboniferous chain between Penignt and Kirkby Stephen. *Proc. Geol. Soc.*, vol. i., pp. 318-320. Published in full, *Trans. Geol. Soc.*, ser. 2., vol. iv., pp. 69-102 (1836).
- 13 WEST, W.—Practical and Philosophical Observations on Natural Waters. [Carburetted hydrogen in the Harrogate Sulphur Water, p. 45]. *Journ. Roy. Inst.*, n.s., vol. i., pp. 38-46.

- 14 WITHAM, H.—Observations on Fossil Vegetables, accompanied by Representations of their Internal Structure, as seen through the Microscope. [Some from the Whitby Lias]. 4to. *Edinburgh and London*. Ed. 2, 1833.

1832.

- 1 ANON [J. AINSWORTH].—A Guide to Scarborough and its environs, being a description of the Antiquities, Public Buildings, etc., of the celebrated watering-place, and a brief account of whatever is interesting to a stranger within an extent of twenty miles of the country. [Scarborough Spaw, pp. 11-18. Geology, pp. 101-104]. Ed. 7. Pp. 120. 8vo. *Scarborough*. Ed. 8. 8vo. *Scarborough*, 1840. [See under 1806].
- 2 AINSWORTH, J.—[See Anon.].
- 3 ATKINS, J.—Treatise on the Scarborough Waters. ‘*Scarborough Miscellany*,’ 1832-34.
- 4 BEAN, W.—[See J. Cole].
- 5 COLE, J.—Scarborough Guide: comprising a History of the Town and its public buildings, notices of the villages, and seats of the nobility, embracing descriptive accounts of paintings and antiquities, with Catalogues of the Natural Productions of the Coast, etc. [The Spa, pp. 40-52; Minerals, p. 70; Fossils, by W. BEAN, pp. 90-98; Kirkdale Cavern, pp. 134, 135]. Ed. 5. Pp. 152. 8vo. *Scarborough*. [See under C. R. Todd, 1841].
- 6 CONYBEARE, W. D.—Inquiry how far the Theory of M. Elie de Beaumont concerning the Parallism of Lines of Elevation of the same Geological Æra, is agreeable to the Phenomena as exhibited in Great Britain. *Phil. Mag.*, vol. i., pp. 118-126.
- 7 DE LE BECHE.—[See 1831].
- 8 EVANS, B.—[See T. Hinderwell].
- 9 FITTON, W. H.—[Notes on the History of English Geology]. *Phil. Mag.*, vol. i., pp. 147-160, 268-275, 275-450; vol. ii., pp. 37-57. [See 1818].
- 10 GAIRDNER, M.—Essay on the Natural History, Origin, Composition, and Medicinal Effects of Mineral and Thermal Springs. [Harrogate and Knaresborough, pp. 149, 217, 233]. 12mo. *Edinburgh and London*.

- 11 HALL, E.—A Mineralogical and Geological Map of the Coal Fields of Lancashire, with parts of Yorkshire, Cheshire, and Derbyshire. (One inch to a mile). *Manchester*.
- 12 HARGROVE, E.—The History of the Castle, Town and Forest of Knaresborough. [Harrogate Springs, pp. 81-92. Knaresborough Spa, p. 114]. Ed. 7. Pp. 318. 12mo. *Knaresborough*.
- 13 HINDERWELL, T.—The History and Antiquities of Scarborough. Third Edition, enlarged with a brief memoir of the Author. By B. EVANS. [Geology by Dr. MURRAY, pp. 244-258]. Ed. 3. 8vo. *Scarborough*.
- 14 HUTTON, W.—On the Stratiform Basalt associated with the Carboniferous Formation of the North of England. *Trans. Northumb. Durham Nat. Hist. Soc.*, vol. ii., part 1., pp. 187-214; *Proc. Geol. Soc.*, vol. i., pp. 341-342.
- 15 LYELL, C.—[See 1830].
- 16 MURCHISON, R. T.—On the Occurrence of stems of fossil plants in vertical positions in the sandstone of the inferior oolite of the Cleveland Hills. *Proc. Geol. Soc.*, vol. i., p. 391.
- 17 MURRAY.—[See T. Hinderwell].
- 18 PHILLIPS, J.—On the Lower or Ganister Coal Series of Yorkshire. *Phil. Mag.*, ser. 3, vol. i., pp. 349-353.
- 19 SMITH, W.—Geological Map of Hackness (Scale about six inches to a mile). Lithographed by Day, *London*.
- 20 WALKER, JOHN.—Observations to prove Filey Bay, in Yorkshire, the Portus Felix, or Sinus Salutaris; and Flamborough Head the Ocellum Promontorium, of the Romans (maps and sections). *Archaeologia*, vol. xxv., pp. 127-145.
- 21 YOUNG, G.—On the Fossil Remains of Quadrupeds, etc., discovered in the Cavern at Kirkdale, in Yorkshire, and in other Cavities or Seams in Limestone Rocks. *Mem. Wernerian Nat. Hist. Soc.*, vol. vi. (for the years 1826-31), pp. 171-183.

1833.

- 1 ANON.—The New Harrogate Guide. Ed. 6. [See under 1815].
- 2 ——— The Tourist's Companion. Ed. 6. [See under 1817].

- 3 AGASSIZ, L.—Recherches sur les Poissons fossils. [Leeds; Halifax, Whitby, Scarborough, Malton, Speeton]. 5 vols. 4to. *Neuchatel*, 1833-43.
- 4 BROOKES, W. A.—Port William at Redcar. [Geological observations on the south side of the Tees]. *Nautical Mag.*, vol. ii., pp. 227-230.
- 5 DE LA BECHE. [See 1831].
- 6 FAIRHOLME, G.—A General View of the Geology of Scripture, etc. [Kirkdale Cavern, pp. 290, etc.]. 8vo. *London*.
- 7 HUNTER, ADAM.—[See 1830].
- 8 HUTTON, W.—[See J. Lindley].
- 9 LINDLEY, J., and W. HUTTON.—[See 1831].
- 10 PHILLIPS, J.—[Lecture on the Geology of Yorkshire. Alludes to the character of the Carboniferous Rocks and to Boroughbridge]. *Trans. Brit. Assoc.* for 1831, pp. 56-58.
- 11 SCUDAMORE, C.—[See 1820].
- 12 WILLIAMSON, W. C.—[See under 1837].
- 13 WITHAM, H.—The Internal Structure of Fossil Vegetables found in the Carboniferous and Oolitic Deposits of Great Britain. 4to. *Edinburgh and London*. [See 1831].

## 1834.

- 1 CONYBEARE, W. D.—On the probable future Extension of the Coalfields at present worked. [Coal worked on the banks of the Nid, near Bilton, p. 162]. *Phil. Mag.*, ser. 3, vol. iv., pp. 161-163.
- 2 HAWKINS, T.—Memoirs of Ichthyosauri and Plesiosauri, extinct monsters of the ancient earth, with twenty-eight plates . . . [Whitby Lias, pp. 4, 36]. Fol. *London*.
- 3 HUNTER, ADAM.—[See 1830].
- 4 LEE, EDWIN.—An Account of the most frequented Watering Places on the Continent, and of the medical application of their mineral springs; with Tables of Analysis; and an Appendix of English Mineral Waters. [Harrogate. Pp. 216-221]. *London*. Ed. 2. Pp. 232. 1836. 8vo. *London*.
- 5 LYELL, C.—[See 1830].
- 6 NICHOL, W.—Observations on the Structure of recent and fossil Conifera. [From the Lias of Whitby]. (*Wernerian Society*). *Edin. New Phil. Journ.*, vol. xvi., pp. 137-158.

- 7 PHILLIPS, J.—On the Ancient and partly-buried Forests of Holderness. *Phil. Mag.*, ser. 3, vol. iv., pp. 282-288.
- 8 SHAW, P.—An Enquiry into the Contents, Virtues, and Uses of the Scarborough Spaw-Waters; with the Method of examining any other Mineral Water. 8vo. *London*.
- 9 WILLIAMSON, W.—On the Distribution of Organic Remains in the Lias Series of Yorkshire, with a View to facilitate its Identification by giving the Situation of its Fossils. *Proc. Geol. Soc.*, vol. ii., pp. 82, 83.

## 1835.

- 1 ANON.—On the Contents, Virtues and Uses of cold and hot Mineral Springs; particularly those of Scarborough: in a letter to Robert Robinson, recorder of the Corporation. [Notice of springs, pp. 15, 16]. Pp. 43. 8vo. *London*.
- 2 BEAN, W.—A short account of an interesting Deposit of Fossil Shells at Burlington Quay. *Mag. Nat. Hist.*, vol. viii., p. 355.
- 3 HUTTON, W.—[See J. Lindley].
- 4 LINDLEY, J., and W. HUTTON—[See 1831].
- 5 MITCHELL, J.—[See 1836].
- 6 NICOL, W.—On the Anatomical Structure of recent and fossil Woods. [Whitby]. *Rep. Brit. Assoc. for 1834*, pp. 660-666.
- 7 PHILLIPS, J.—Geology of Yorkshire. 2nd ed. [See 1829].
- 8 TREVELYN, W. C.—On the occurrence of fragments of garnet in the Millstone Grit. [Kirkstall]. *Phil. Mag* ser. 3., vol. vi., p. 76.
- 9 WALKER, T. D.—[See 1828].

## 1836.

- 1 BEAN, W.—Descriptions and Figures of *Unio distortus* and *Cypris concentrica*, from the Upper Sandstone and Shale of Scarborough, etc. *Mag. Nat. Hist.*, vol. ix., pp. 376-377.
- 2 BELCHER, H.—Illustrations of the Scenery on the line of the Whitby and Pickering Railway in the North Eastern part of Yorkshire. From drawings by G. Dodgson.

With a short Description of the District and Undertaking.  
[Alludes to the Main Seam in the Murk Esk]. Pp. viii.,  
115. 8vo. *London*.

- 3 BUCKLAND, W.—Geology and Mineralogy considered with reference to Natural Theology. [Whitby Ichthyosaurus, vol. i., p. 168; Ammonites, p. 339]. 2 vols. 8vo. *London*. *Bridgewater Treatise*, vi.
- 4 CALVERT, M.—[See 1823].
- 5 DODGSON, G.—[See H. Belcher].
- 6 HALL, ELIAS.—Introduction to the Mineral and Geological Map of the Coalfield of Lancashire, with a part of Yorkshire, Derbyshire and Cheshire. Pp. iv., 28. 8vo. *Manchester*. [Map published 1832].
- 7 LEE, EDWIN.—[See 1834].
- 8 MITCHELL, J.—On the Chalk and Flint of Yorkshire, as compared with the Chalk and Flint of the Southern Counties of England. *Edin. New Phil. Journ.*, vol. xx., pp. 68-74; Abstract in *Proc. Geol. Soc.*, vol. ii., p. 113 (1835).
- 9 NIXON, J.—Trigonometrical Height of Ingleborough above the level of the Sea. *Phil. Mag.*, ser. 2, vol. vi., pp. 248-261, 429-440.
- 10 PHILLIPS, J.—Illustrations of the Geology of Yorkshire; or, a Description of the Strata and Organic Remains; accompanied by a Geological Map, Sections and Diagrams, and Figures of the Fossils. Pt. 2. The Mountain Limestone District. 4to. *London*.
- 11 ——— Notice of a newly discovered Tertiary Deposit on the Coast of Yorkshire. [Bridlington]. *Rep. Brit. Assoc.*, for 1835, Sections, p. 62.
- 12 SEDGWICK, A.—Introduction to the general Structure of the Cumbrian Mountains; with a Description of the great Dislocations by which they have been separated from the neighbouring Carboniferous Chains. *Trans. Geol. Soc.*, ser. 2, vol. iv., pp. 47-69.
- 13 ——— Description of a Series of Longitudinal and Transverse Sections through a portion of the Carboniferous Chain between Penigent and Kirkby Stephen. *Ibid.*, pp. 69-102; Abstract in *Proc. Geol. Soc.*, vol. i., pp. 318-320 (1831).

- 14 THOMSON, R. D.—Examination of the water of the North Well at Scarborough. *Rec. Gen. Sci.*, vol. iv., pp. 53, 54.
- 15 WILLIAMSON, W. C.—A Notice of two hitherto undescribed Species of Radiaria, from the Marlstones of Yorkshire ; and Remarks on the Organic Remains in that Stratum. *Mag. Nat. Hist.*, vol. ix., pp. 425-429, 554.
- 16 ———.—[See under 1837].
- 17 YOUNG, GEORGE.—Geology and Scenery of Craven. [See under 1867].

## 1837.

- 1 ANON.—A Report of the trial The King v. Thackwray respecting the sulphur wells at Low Harrogate with notes, etc. Tried at York Assizes before Baron Alderson and a Special Jury, March 14th, 1837. 8vo. *Harrogate*.
- 2 ——— The Tourist's Guide ; being a concise history and description of Ripon, Studley Royal, Fountains Abbey, Markenfield, Brimham Rocks, Hackfall, and Newby Hall ; intended as a companion to persons visiting those places. . . . [Brimham Rocks, pp. 99-101]. Pp. 106. 8vo. *Ripon*. Ed. 2, 1838.
- 3 BRONGNIART, A.—[See 1828].
- 4 CHARLESWORTH, E.—Illustrated Zoological Notices. 2. On the recent Discovery of a Fossil Crocodile at Whitby. *Mag. Nat. Hist.*, vol. x., p. 531, fig. 65.
- 5 DAUBENY, C.—Report on the Present State of our Knowledge with respect to Mineral and Thermal Waters. *Rep. Brit. Assoc.* for 1836, pp. 1-95 ; *L'Institut.*, t. vi., pp. 219, 220, 235, 236, 271, 272 [1838] ; t. vii., pp. 4-8, 14-16, 36-40, 46-48, 55, 56, 62-64, 91, 92 [1839].
- 6 DE LA BECHE.—[See 1831].
- 7 EGERTON, P. DE G.—A systematic and stratigraphical Catalogue of the Fossil Fish in the Cabinet of Lord Cole and Sir Philip Grey Egerton ; together with an alphabetical and stratigraphical catalogue of the same species, with references to their published figures and descriptions. [Eugnathus, n. s., and Lepidotus gigas from the Lias of Whitby]. 4to. *London*.



- 8 GEORGE, E. S.—On the Yorkshire Coal-field. *Trans. Leeds Lit. Phil. Soc.*, vol. i., part 1, pp. 135-191.
- 9 GILBERTSON, W.—Catalogue of Fossils from the Mountain Limestone of Great Britain. 8vo. *Preston*.
- 10 HUNTON, L.—Remarks on a Section of the Upper Lias and Marlstone of Yorkshire, showing the limited vertical range of the Species of Ammonites and other Testacea, with their value as Geological Tests. *Trans. Geol. Soc.*, ser. 2, vol. v., pp. 215-222. *Proc. Geol. Soc.*, vol. ii., pp. 416, 417.
- 11 HUTTON, W.—[See J. Lindley].
- 12 LINDLEY, J.—and W. HUTTON. [See 1831].
- 13 LYELL, C.—[See 1830].
- 14 PHILLIPS, J.—On the Removal of large Blocks or Boulders from the Cumbrian Mountains in various directions. [Vale of York]. *Rep. Brit. Assoc. for 1836*. Sections p. 87.
- 15 STOKES, C.—Notice respecting a piece of Recent Wood partly petrified by Carbonate of Lime, with some Remarks on Fossil Woods. [Ferrybridge]. *Trans. Geol. Soc.*, ser. 2, vol. v., pp. 207-212.
- 16 TOOKE, A. W.—The Mineral Topography of Great Britain. [Celestine at Knaresborough, Sulphate of Strontian in the Nidd, p. 54]. *Mining Review*, No. 9, pp. 39-60; No. 10, pp. 197-209.
- 17 WILLIAMSON, W. C.—On the Distribution of Fossil Remains on the Yorkshire Coast, from the Lower Lias to the Bath Oolite inclusive. *Trans. Geol. Soc.*, ser. 2, vol. v., pp. 223-242. Under different title; *Proc. Geol. Soc.*, vol. ii., pp. 82, 83, 429-432 (1833, 1836).

## 1838.

- 1 ANON.—An Historical and Descriptive Account of Brimham Rocks, in the West Riding of Yorkshire. Pp. 23. 2 woodcuts. 8vo. *Ripon*. Ed. 3. Pp. 14. 12mo. *Ripon*. Ed. 4. 12mo. 1842. Ed. 5, 1845. 12mo. *Ripon*.
- 2 ——— The Tourist's Guide. [See 1837].
- 3 ——— Geology of England and Wales (many interesting references to Yorkshire). 12mo. *London*. E. Grettan, with folding Geological map in colours, by Gilbert.

- 4 BOOTH, A.—[See 1830].
- 5 D'ARCHIAE, E. J. A.—Memoires sur les étages inférieurs de la formation crétacée dans le nord de la France et Angleterre. [Kimeridge Clay of Speeton, p. 262]. *Bull. Soc. Geol. France*, t. ix., pp. 245, 259.
- 6 DAUBENY, C.—[See 1837].
- 7 GILBERT.—[See Anon].
- 8 HUNTER, ADAM.—[See 1830].
- 9 LYELL, C.—Elements of Geology. 8vo. *London*. Ed. 2, 1841. Ed. 3-5. (Styled 'A Manual of Elementary Geology'), 1851, 1852, 1853; Supplement to Ed. 5, 1857; Ed. 6, 1865, Spanish (Ed. 2), by J. E. Del Bays, *Madrid*, 1847; French (Ed. 5), by Hugard, *Paris*, 1856.
- 10 MANTELL, G. A.—The Wonders of Geology. Pp. xvi., 689. 2 vols. 8vo. *London*. Ed. 3, 1839. Ed. 6, 1848. Ed. 7, revised and enlarged by T. R. Jones, 1857.
- 11 ROOKE, J.—Geology as a Science, applied to the Reclamation of Land from the Sea, the Construction of Harbours, the Formation of Railroads, and the Discovery of Coal. [Some notes on Yorkshire geology]. Pp. viii., 356. 12mo. *London*. Ed. 2, 1840.
- 12 WILLIAMSON, W. C.—On the Distribution of Organic Remains in part of the Oolitic Series on the Coast of Yorkshire. [Cornbrash, Kellaways Rock and Oxford Clay]. *Proc. Geol. Soc.*, vol. ii., pp. 671, 672.
- 13 YOUNG, GEORGE.—Scriptural Geology; or, an essay on the High Antiquity ascribed to the organic remains imbedded in stratified rocks at Whitby, etc. *London*. Pp. 78.

1839.

- 1 ANON.—The History of Ripon with Historic Notices and Descriptions of Fountains Abbey, Studley, Swinton Park, Newby Hall, Brimham Crags, Plumpton, Knaresborough, Bolton Abbey, Harewood House, Harrogate, etc., etc., forming a compendious Guide for Visitors. Pp. 176. 12mo. *Ripon*. Reprinted in 1840 as the Harrogate Visitor's Handbook.
- 2 ALEXANDER, W.—A Treatise on the various modes of Bathing, with the Analyses of the Mineral Springs of

Scarborough, and all their medicinal uses. In two parts. Pp. 110+96. 8vo. *Scarborough*. Another edition, under different title. Pp. 69. 8vo. *Scarborough*, 1881. Another edition. Pp. 132. 8vo. *Halifax*, 1882.

- 3 [BARRY, CHARLES, etc.].—Report Addressed to the Commissioners of Her Majesty's Woods, Forests, etc., as the Result of an Inquiry, undertaken under the authority of the Lords' Commissioners of Her Majesty's Treasury by CHARLES BARRY, H. T. DE LA BECHE, WILLIAM SMITH, and CHARLES H. SMITH, with reference to the Selection of Stone for building the new Houses of Parliament. Pp. 36. Fol. *London*.
- 4 BEAN, W.—A Catalogue of the Fossils found in the Cornbrash Limestone of Scarborough; with Figures and Descriptions of some of the undescribed Species. *Mag. Nat. Hist.*, ser. 2, vol. iii., pp. 57-62.
- 5 DAUBENY, C.—[See 1837].
- 6 DE LA BECHE, H.—[See Charles Barry].
- 7 JOHNSTON, J. F. W.—On Middletonite and some other Mineral Substances of Organic Origin. *Rep. Brit. Assoc.*, for 1838; Sections, p. 60; *Phil. Mag.*, ser. 3, vol. xiv., pp. 87-95; *Journ. Prak. Chem.*, bd. xvii., pp. 107-117.
- 8 LEE, J. E.—Notice of Undescribed Zoophytes from the Yorkshire Chalk. [Bridlington]. *Mag. Nat. Hist.*, ser. 2, vol. iii., pp. 10-17.
- 9 LYELL, C.—On the Relative Ages of the Tertiary Deposits commonly called 'Crag' in the Counties of Norfolk and Suffolk. [Yorkshire, p. 323]. *Ibid.*, pp. 313-330.
- 10 MANTELL, G. A.—[See 1838].
- 11 PHILLIPS, J.—Biographical Notice of William Smith, LL.D. *Mag. Nat. Hist.*, ser. 2, vol. iii., pp. 213-220, with Portrait in Supplement, pl. 1.
- 12 SMITH, CHARLES H.—[See Charles Barry].
- 13 SMITH, WILLIAM.—[See Charles Barry].
- 14 WALKER, J. K.—Some Observations on certain supposed Druidical Remains in the County of York (near Knaresborough, etc.). *Gentleman's Magazine*, part 1, pp. 133-140. (See also 1840).

- 15 WEATHERHEAD, W.—The History of Netherdale from the times of the Ancient Britons to the Present Time, giving an account of the Most Remarkable Things, as the Lead Mines and other Minerals . . . Brimham Rocks, etc. Pp. 56. 12mo. *Leeds*.
  - 16 WILLIAMSON, W. C.—A Notice on the Fossil Fishes of the Yorkshire and Lancashire Coal Fields. *Proc. Geol. Soc.*, vol. iii., pp. 153, 154.
- 1840.
- 1 ANON.—The Harrogate Visitor's Hand-Book, containing descriptions of Ripon, Fountains Abbey, Studley, Hackfall, Swinton Park, Newby Hall, Brimham Crag, Plumptre, Knaresborough, Bolton Abbey, Harewood House, Harrogate, etc., to which is appended Observations on the Harrogate Waters, and Directions for their use, by ALFRED SMITH. 12mo. *Ripon*. Ed. 8. Pp. 92. 1847. Ed. 11, 1852. This is a reprint of the guide book published in 1839, which was founded on the History of Ripon, 1839.
  - 2 AINSWORTH, J.—[See 1832].
  - 3 AINSWORTH, W.—The Scarborough Guide. Ed. 8. [See under 1806].
  - 4 ALEXANDER, W.—The Horley Green Mineral Water: its new chemical analysis and medical uses. 8vo. *London*.
  - 5 BAINES, H.—The Flora of Yorkshire. With two Plates. [The Physical Geography of Yorkshire, pp. 1-16, and geological map by J. PHILLIPS]. 8vo. *London*.
  - 6 EMBLETON, T. W.—On the Order of Succession of the Coal Seams in the Northern Coal Field of Yorkshire. (Abstract). *Proc. Yorks. Geol. Soc.*, vol. i., pp. 25-27.
  - 7 HOLT, H.—[See C. Morton].
  - 8 LEE, J. E.—New Species of *Siphonia* from the Yorkshire Chalk. [*S. fusiformis*, from Bridlington]. *Mag. Nat. Hist.*, ser. 2, vol. iv., pp. 46, 47.
  - 9 LYELL, C.—[See 1830].
  - 10 MORTON, C.—Report of Proceedings of Sub-Committee for constructing a Geological Section of the Yorkshire Coal Field. *Proc. Yorks. Geol. Soc.*, vol. i., No. 1, pp. 27-31.

- 11 MORTON, [C.] and [H.] HOLT.—The Report of the Committee appointed to recommend a line of section across the Yorkshire Coal Field. *Proc. Yorks. Geol. Soc.*, vol. i., No. 3, pp. 18-24.
- 12 OWEN, R.—Report on British Fossil Reptiles. [*Plesiosaurus rugosus*, *Ichthyosaurus intermedius* and *I. acutirostris*, from Whitby]. *Rep. Brit. Assoc.*, for 1839, pp. 43-126.
- 13 PALLISER, P.—History and Directory of Harrogate, containing a variety of useful information; to which is added a descriptive sketch of Knaresborough, etc. [History and analyses of Water.] Ed. 2, 8vo., *Harrogate*.
- 14 PHILLIPS, J.—[See H. Baines].
- 15 POULSON, G.—The History and Antiquities of the Seigniorship of Holderness, in the East Riding of the County of York. . . . 2 vols. 4to. *Hull*. [Contains J. Tuke's Map of Holderness, 1786, showing distances of villages from the sea].
- 16 ROOKE, J.—[See 1838].
- 17 SIMPSON, MARTIN.—Geology of the Whitby District. Report of a Lecture delivered before the Whitby Literary and Philosophical Society *Whitby*. 12mo. Pp. 12. [n.d. ? 1840].
- 18 SMITH, ALFRED.—[See Anon].
- 19 SMITH, C. H.—Lithology; or, Observations on Stone used for Building. Part 1, Treating chiefly of the Sandstones. Pp. 40. 1840. Part 2, Treating chiefly of the Magnesian Limestones of Yorkshire, Derbyshire and Nottinghamshire, with reference to the selection of stone for building the exterior of the New Houses of Parliament. Pp. 36. 1844. 4to. *London*. Part 1, also *Trans. Roy. Inst. British Arch.*, vol. i., part 1, pp. 129-168, 1842.
- 20 SOWERBY, J. D. C.—The Mineral Conchology of Great Britain. Vol. vii., 1840-1844. [See under 1812].
- 21 TEALE, T. P.—On the Fossil Ichthyology of the Yorkshire Coal Field. *Proc. Yorks. Geol. Soc.*, vol. i., No. 1, pp. 7-13.
- 22 THORPE, W.—On the proposed line of section between the Coal Field of Yorkshire and that of Lancashire. *Ibid* No. 2. Pp. 7-18.

- 23 THORPE, W.—On the Disturbances in the district of the valley of the Don. *Proc. Yorks. Geol. Soc.*, vol. i., No. 3, pp. 4-17.
- 24 ——— On the Geology [should be 'Agriculture'] of the West Riding of Yorkshire, considered geologically—and first, of the New Red Sandstone district. [Classification of soils, chiefly south of the Aire]. *Ibid.* No. 3, pp. 46-86.
- 25 TUKE, J.—[See G. Poulson].
- 26 WALKER, J. K.—[Druidical Remains in Yorkshire; letter upon; refers to the Bridestone, etc.]. *Gentleman's Magazine*, part 1, p. 135.
- 27 YOUNG, GEORGE.—A Picture of Whitby and its Environs. 2nd ed. [See 1824].

1841.

- 1 ANON [J. R. WALBRAN]. The Harrogate Visitor's Pictorial Pocket Guide, to Ripley, Studley, Fountains Abbey, Newby Hall, Hackfield, Swinton, Markenfield Hall, Ripley, Harrogate, Knaresborough, Brimham Rocks, Bolton Priory, Harewood House, etc. [A Treatise on the Natural Uses and Effects of the Harrogate Mineral Waters (Analyses), pp. 69-79; Brimham Rocks, pp. 80, 81; Knaresborough, p. 82]. Pp. 93. 12mo. *Ripon*. [See ANON, 1817].
- 2 ——— [J. ALLEN].—The Stranger's Guide to Ferriby, Welton, Elloughton, and South Cave, in the East Riding of the County of York. 8vo. *Hull and London*.
- 3 ALEXANDER, W.—On the Mineral Springs of the Parish of Halifax, geologically considered. [List of Fossils from the Limestone Shale of the Vale of Todmorden, by J. GIBSON, pp. 166-168]. *Proc. Yorks. Geol. Soc.*, vol. i., pp. 148-171.
- 4 ALLEN, J.—[See Anon].
- 5 BROWN, T.—Description of some New Species of Fossil Shells found chiefly in the Vale of Todmorden, Yorkshire. *Trans. Manchester Geol. Soc.*, vol. i., pp. 212-232.
- 6 CLAY, J. T.—Observations on the Occurrence of Boulders of Granite and other Crystalline Rocks in the Valley of the Calder, near Halifax. *Proc. Yorks. Geol. Soc.*, vol. i., pp. 201-206.

- 7 EMBLETON [T. W.], HOLT [H.], and MORTON [C.].—Report on the Geology of the North Midland Railway. *Proc. Yorks. Geol. Soc.*, vol. i., pp. 138-142.
- 8 GIBSON, J.—[See W. Alexander].
- 9 GRANVILLE, A. B.—The Spas of England and principal sea-bathing places. Vol. i., Northern Spas. [Harrogate, pp. 36-38.; Knaresborough and Aldfield, etc., pp. 87-127 ; also tables of analyses]. 3 vols. 8vo. *London*.
- 10 HARTOP, H.—On the Occurrence of Shells in the Yorkshire Coal Field. *Proc. Yorks. Geol. Soc.*, vol. i., pp. 200, 201.
- 11 HILEY, J. S.—Manufacture of Copperas. [The distribution of pyrites in the Coal Measures]. *Chemist*, vol. ii., pp. 275-279.
- 12 ——— On the Collieries of the Parish of Halifax and their Chemical and Geological Relations. *Ibid.*, pp. 293-298.
- 13 ——— On the Waters of the Parish of Halifax. *Ibid.*, pp. 325-331.
- 14 HOLT [H.].—[See (T. W.) Embleton].
- 15 JAMES, J.—The History and Topography of Bradford (in the County of York), with Topographical Notices of its Parish. [Geological Notes, pp. 9-12]. Pp. x., 444. 8vo. *London* and *Bradford*. Continuation see 1866.
- 16 KELK, J.—The Scarborough Spa, its new Chemical Analysis and Medicinal Uses. . . . Pp. viii.+43. 8vo. *London*. Ed. 4. 1860.
- 17 LEE, EDWIN.—The Mineral Springs of England, and their curative efficiency ; with remarks on Bathing, and on artificial mineral waters. [Harrogate, pp. 47-58]. Pp. 124. 12mo. *London*. Ed. 2. Pp. 212, 1848. Ed. 3. Pp. 280, 1854. Ed. 4, 1859. Ed. 1863.
- 18 LYELL, C.—[See 1838].
- 19 MORTON [C.].—[See (T. W.) Embleton].
- 20 OWEN, R.—A description of a portion of the skeleton of the Cetiosaurus, a gigantic extinct Saurian Reptile occurring in the Oolitic formations of different portions of England. [Scarborough]. *Proc. Geol. Soc.*, vol. iii., pp. 457-462.
- 21 THEAKSTON, [S. W.].—Guide to Scarborough : comprising a

- brief sketch of the Antiquities, Natural Productions and romantic scenery of the town and neighbourhood. [Geology, pp. 105-124]. Ed. 2. Pp. 186. 8vo. *Scarborough*. Ed. 1, 1832? [See Anon, 1832].
- 22 THORP, W.—On the Agriculture of the West Riding of Yorkshire considered geologically: 2nd, On the Magnesian Limestone District. *Proc. Yorks. Geol. Soc.*, vol. i., pp. 91-137.
- 23 ——— Report on the Agricultural Geology of part of the Wold District of Yorkshire, and of the Oolite in the Neighbourhood of North and South Cave, etc. *Ibid.*, pp. 207-286, and geological map.
- 24 TODD, C. R.—Scarborough Guide: comprising a history of the town and its public buildings, notices of the villages, and seats of the nobility and gentry; embracing descriptive accounts of paintings and antiquities, etc., etc. [The Spaw, pp. 46-64; Kirkdale Cavern, pp. 124-126]. Ed. 7. Pp. 140. 8vo. *Scarborough*. [See under J. Cole,]. Ed. 5, 1832.
- 25 WALBRAN, J. R.—[See Anon].
- 26 WILLIAMSON, W. C.—On the Distribution of Organic Remains in the Strata of the Yorkshire Coast, from the Upper Sandstone to the Oxford Clay, inclusive. *Proc. Geol. Soc.*, vol. ii., pp. 671-672; *Trans. Geol. Soc.*, ser. 2, vol. vi., pp. 143-152. 1842.
- 1842.
- 1 ANON.—[See 1838].
- 2 BENNETT, W.—Observations on the Mineral Springs of Harrogate. [Position of springs and amount of salts]. Pp. 11. 8vo. *Harrogate*.
- 3 CLAY, J. T.—Observations on the Yorkshire Drift and Gravel. [Vale of York and Teesdale]. *Proc. Yorks. Geol. Soc.*, vol. i., pp. 338-352.
- 4 LANKESTER, E.—An Account of Askern and its Mineral Springs, together with a Sketch of the Natural History . . . of the immediate Neighbourhood. [Geology, p. 35; Waters, p. 37. Coloured geological map and section]. 12mo. *London*. Pp. 151.



- 5 LEE, W.—Fossil Foot-Prints of the Carboniferous System. *Proc. Yorks. Geol. Soc.*, vol. i., pp. 409-418.
- 6 OWEN, R.—Report on British Fossil Reptiles. [*Teleosaurus chapmanni*, from Whitby, pp. 75-81; *Cetiosaurus longus*, p. 102; *Megalosaurus*, from Malton, p. 110]. *Rep. Brit. Assoc.*, for 1841, pp. 60-204.
- 7 SEDGWICK, A.—[See W. Wordsworth, 1843].
- 8 SMITH, C. H.—[See 1840].
- 9 SMITH, ALFRED—The Harrogate Medical Guide. A Popular Treatise on the Mineral Waters of Harrogate, and the Diseases in which they are useful; with supplementary remarks on diet and exercise. [Analyses]. Pp. xi., 96. 8vo. *Ripon*. Ed. 2. 12mo. *London*, 1847. Ed. 3. Pp. xi., 116. 16mo. *London*, 1860.
- 10 STUTCHBURY, S.—On a new genus of Fossil Bivalve Shells. [*Pachyodon*]. *Ann. Mag. Nat. Hist.*, vol. viii., pp. 481-485.
- 11 WILLIAMSON, W. C.—[See under 1841].
- 12 WORDSWORTH, W.—[See 1843].

1843.

- 1 ANON.—Yorkshire (Geology). [Red Marls and Magnesian Limestone of Ripon and Knaresborough]. *Penny Cyclopædia*, vol. xxvii., p. 671. Fol. *London*.
- 2 AGASSIZ, L.—[See 1833].
- 3 BENNETT, W.—Observations on the Sulphureous Springs of Harrogate. Pp. 64. 8vo. *London*.
- 4 BLACK, J.—On the Submerged Forests of Great Britain. *Geologist*, for 1843; pp. 174-178; *Trans. Manchester Geol. Soc.*, vol. viii., pp. 39, 40, 1869.
- 5 BROWN, T.—Description of some New Species of the Genus *Pachyodon*. *Ann. Mag. Nat. Hist.*, vol. xii., pp. 390-396.
- 6 ——— The Elements of Fossil Conchology; according to the arrangement of Lamarck; with the newly established genera of other authors. [Many Yorkshire species]. Pp. 138. 8vo. *London*.
- 7 CLAY, J. T.—On the Occurrence of Boulders in the Valley of the Calder. [Hebden Bridge]. *Rep. Brit. Assoc.*, for 1842; Sections, pp. 55, 56.

- 8 JOHNSON, J.—Excursions to the Principal Mineral Waters of England in pursuit of Health and Information. [Harrogate, pp. 5-30]. 8vo. *London*.
- 9 JOHNSTONE, J. V. B.—On the Application of Geology to Agriculture. [Oolite of Scarborough]. *Journ. Roy. Agric. Soc.*, vol. i., for 1840, pp. 270-274.
- 10 MORRIS, J.—A Catalogue of British Fossils. 8vo. *London*. Ed. 2, 1854.
- 11 OSANN, E.—[See 1829].
- 12 OWEN, R.—Report on the British Fossil Mammalia. [Kirkdale Cavern]. *Rep. Brit. Assoc.*, for 1842, pp. 54-74.
- 13 PHILLIPS, J.—Article 'Geology.' *The Penny Cylopædia*, vol. xxvii., pp. 671-674.
- 14 SIMPSON, M.—A Monograph of the Ammonites of the Yorkshire Lias ; containing the specific characters, and popular notices, of more than 100 species ; with reference to the particular beds and localities where each is to be found ; including, also, the two species of Nautilus. Described from Nature. Pp. 60. 12mo. *London*.
- 15 SEDGWICK, A.—[See Wordsworth].
- 16 THORPE, W.—On the Indications which are Guides in judging of the Fertility or Barrenness of the Soil. [Soils on different formations throughout Yorkshire]. *Proc. Yorks. Geol. Soc.*, vol. ii., pp. 136-155.
- 17 WESLEY, JOHN.—A Strange Phenomenon. [See 1755].
- 18 WORDSWORTH, W.—A Complete Guide to the Lakes, comprising minute directions for the tourist, with W. Wordsworth's description of the Scenery of the Country, etc. ; and Three Letters on the Geology of the Lake District, by the Rev. Professor Sedgwick. Pp. 181-225. Ed. 2. 8vo. *Kendal*. Ed. 1, 1842 ? Other editions, 1853, 1859.

1844.

- 1 ANON.—First Report of the Commissioners for inquiring into the state of large towns and populous districts. Fol. *London*.

- 2 AGASSIZ, M.—Synoptical Table of British Fossil Fishes, arranged in order of the Geological Formations. [Many Yorkshire species]. *Rep. Brit. Assoc. for 1843*, pp. 194-207.
- 3 CALVERT, M.—The History of Knaresborough ; comprising an accurate and detailed account of the Castle, the Forest, and the several townships included in the said parish. [Knaresborough Spaws, pp. 95-105]. 12mo. *Knaresborough*.
- 4 DAUBENY, C.—On the Occurrence of Fluorine in Recent as well as in Fossil Bones. [Kirkdale]. *Phil. Mag.*, ser. 3, vol. xxv., pp. 122-129 ; *Edin. New Phil. Journ.*, vol. xxxvii., pp. 288-294 ; *Arch. Phys. Path. Chem.*, 1844, pp. 270, 271 ; *Mem. Chem. Soc.*, vol. ii., pp. 97-104 (1845) ; *Proc. Ashmol. Soc.*, vol. ii., pp. 58, 59.
- 5 EDDY, S.—On the Geology of the Grassington Mines, near Skipton, in Yorkshire. *Trans. Roy. Geol. Soc. Cornwall*, vol. vi., pp. 186-189 ; *Rep. Brit. Assoc. for 1844*. Sections, p. 52. (1845).
- 6 FORBES, E.—On the Fossil Remains of Starfishes of the Order Ophiuridæ found in Britain. *Proc. Geol. Soc.*, vol. iv., pp. 232-234.
- 7 INGLIS, J.—Letter on a Fossil (*Nautilus rawsoni*) found in the Catherine Slack Coal Beds near Halifax. *Proc. Yorks. Geol. Soc.*, vol. ii., p. 182.
- 8 JACKSON, J.—[See C. R. Smith].
- 9 JONES, T. R.—[See G. A. Mantell].
- 10 MANTELL, G. A.—The Medals of Creation or First Lessons in Geology and in the Study of Organic Remains. 2 vols. 8vo. *London*. Ed. 2. 1847. Edited by T. R. JONES. Another Ed., 1854.
- 11 PHILLIPS, J.—Memoirs of William Smith. [Yorkshire, p. 95]. 8vo. *London*.
- 12 SIMPSON, M.—Observations on the discovery of Coprolites in the Stanley Shale and Flockton Coal, or Fish Coal. *Proc. Yorks. Geol. Soc.*, vol. ii., pp. 171-181.
- 13 SMITH, C. H.—Lithology, or Observations on Stone used for building. . . Treating chiefly of the Magnesian Limestone of Yorkshire, Derbyshire, and Nottinghamshire, with reference to the selection of stone for building

- the exterior of the new Houses of Parliament. *Proc. Roy. Inst. Brit. Architects*, vol. i., part vii., pp. 1-36 (map and section).
- 14 SMITH, C. H.—[See 1840].
- 15 SMITH, C. R., and J. JACKSON.—Caves in which Romano-British Remains have been discovered, near Settle, in Yorkshire. [Victoria Cave]. *Collectanea antiqua*, vol. i., pp. 69-72.
- 16 SPENCE, J.—Analyses of Grasses, Soils, etc. [Table iv., Analyses of Magnesian Limestone from Knaresborough, South Stainley, Ripon, etc.]. *Trans. Yorks. Agric. Soc.*, No. 7, pp. 73-101.
- 17 TIMPERLEY, J.—Account of the building of the 'Wellington' Bridge, over the River Aire, at Leeds. [Account of borings]. *Proc. Inst. Civ. Eng.*, vol. iii., pp. 104-106.
- 18 WALBRAN, J. R.—The Pictorial Pocket Guide to Ripon and Harrogate; with topographical observations on Studley Royal, Brimham Rocks, Hackfall, and the Monastic Remains of Fountains and Bolton. [Brimham Rocks, pp. 84, 85. Harrogate, pp. 89-100]. 12mo. *Ripon*. Ed. 2. 12mo. 1847. Ed. 5. 8vo. 1851. Ed. 6. Pp. 137. 8vo. 1856. A reprint called Ed. 6. 8vo. 1857. Ed. 9, Revised by W. F. Stevenson, 1871. 8vo. An Abridgment entitled 'A Guide to Ripon and Fountains Abbey.' Pp. 48. 8vo. *Ripon*. 1862.
- 19 WAY, J. T.—On a Spathic Carbonate of Iron. *Phil. Mag.*, Ser. 3, vol. xxv., p. 129, and *Mem. Chem. Soc.*, vol. ii., p. 105.

1845.

- 1 ANON.—[See 1838].
- 2 ——— [W. LANGDALE].—A Guide to Harrogate with a correct account of the places in the neighbourhood, and a variety of information useful to visitors, with a map and engravings. [Harrogate, pp. 1-25; Knaresborough, 26-34; Plumpton, 34, 35]. Pp. 98. 12mo. *Harrogate and Knaresborough*. [1845]. Another Ed., 1850.
- 3 BRAY, W. B.—Description of the Ouse Bridge, on the Hull and Selby Railway. [Note of the river bed]. *Proc. Inst. Civ. Eng.*, vol. iv., p. 86.

- 4 BRODIE, P. B.—A History of Fossil Insects in the Secondary Rocks of England [brief references to Yorkshire]. *London*. 8vo. Pp. 130. Plates.
- 5 CALVERT, M.—[See 1844].
- 6 CHARLESWORTH, C.—Notice of the Discovery of a large specimen of Plesiosaurus [*P. macrocephalus*] found at Kettleness on the Yorkshire Coast. *Rep. Brit. Assoc.* for 1844, Sections, pp. 49, 50.
- 7 CREYKE, R.—Some account of the process of warping. *Journ. Roy. Agric. Soc.*, vol. v., p. 398.
- 8 DAUBENY, C.—[See 1844].
- 9 DAUBENY, C. G. B.—[See J. Phillips].
- 10 EDDY, S.—Account of the Grassington Lead Mines, illustrating a Model of the Mine. *Rep. Brit. Assoc.* for 1844. Sections. Pp. 52, 53.
- 11 — [See 1844].
- 12 KENNION, G.—On the Medicinal Springs of Harrogate. *Provincial Med. Surg. Journ.*, vol. ii., No. 35, pp. 540-543. Also pp. 8. 12mo. *Harrogate*.
- 13 LANGDALE, W.—[See Anon.].
- 14 LUCAS, W.—On the Limestones of Yorkshire. [Analyses of limestone from Craven, Conisbrough, Weldon near Castleford, Knottingley, Malton, and the Wolds]. *Rep. Brit. Assoc.* for 1844. Sections, pp. 30, 31.
- 15 PHILLIPS, J., and C. G. B. DAUBENY.—Geology. *Encyclopædia Metropolitana*, vol. vi., pp. 529-808. 4to. *London*.
- 16 PHILLIPS, R.—On the state of oxidation of iron in soils. [Analysis of soils]. *Pharm. Journ.*, vol. iv., pp. 505-510; *Phil. Mag.*, ser. 3, vol. xxvi., pp. 437-441; *Amer. Journ.*, ser. 2, vol. xlix., pp. 394-396; *Journ. Pract. Chem.*, vol. xxxvi., pp. 18-23.
- 17 ROOKE, J.—On the Relative Age and True Position of Millstone Grit and Shale, in reference to the Carboniferous System of Stratified Rocks in the British Pennine Chain of Hills. *Rep. Brit. Assoc.* for 1844, Sections, p. 51.
- 18 SEDGWICK, A.—On the Comparative Classification of the Fossiliferous Strata of Wales, with the corresponding deposits in Cumberland, Westmorland, and Lancashire. [Refers to Howgill Fell, etc.]. *Quart. Journ. Geol. Soc.*, vol. i., p. 442.

- 19 WAY, J. T.—[Analyses of recent and fossil bones ; Kirkdale Cave]. *Proc. Ashmol. Soc.*, vol. ii., p. 74.
- 20 ——— [See 1844].
- 21 WEST, W.—On Mineral Springs and other Waters of Yorkshire. [Many analyses]. *Rep. Brit. Assoc. for 1844*, Sections, pp. 105-112.

1846.

- 1 ANON.—The Stranger's Guide : being a concise history and description of Boroughbridge, the Devil's Arrows, and the Roman Antiquities at Aldborough. [The Devil's Arrows, pp. 12-19]. Pp. 124. 12mo. *Boroughbridge*.
- 2 ——— Tidal Harbours Commission. Second Report of the Committee. [Plans of Yorkshire Harbours facing pp. 372, 428]. *Parl. Rep.* Fol. *London*.
- 3 ——— Ophiura Milleri, Phillips, from the Lias (Marlstone) of Staithes, near Whitby. The original in the Museum of the Yorkshire Philosophical Society, plate 8. (Plate only ; briefly referred to on the cover). *The London Geol. Journal*. No. 1. September.
- 4 BINNEY, E. W.—On the Relation of the New Red Sandstone to the Carboniferous Strata in Lancashire and Cheshire. [Comparison with Yorkshire]. *Quart. Journ. Geol. Soc.*, vol. ii., pp. 12-26.
- 5 BRIGGS, H.—On Lime and its Uses in Agriculture. [Analyses of Limestone]. *Proc. Yorks. Geol. Soc.*, vol. ii., pp. 254-270.
- 6 DENNY, H.—On the Fossil Animal Exuviae of the Yorkshire Coal Field. *Proc. Yorks. Geol. Soc.*, vol. ii., pp. 288-302.
- 7 FORBES, E.—On the Connexion between the Distribution of the existing Fauna and Flora of the British Isles, and the Geological Changes which have affected their area, especially during the epoch of the Northern Drift. [Bridlington, p. 392]. *Mem. Geol. Survey*, vol. i., pp. 336-432.
- 8 GREAVES, J.—The History . . . of Cleveland. Ed. 2. [See under 1808].
- 9 HAWKSHAW, J.—Plan of Part of the Yorkshire Coal Field.
- 10 HUNTER, ADAM.—[See 1830].

- 11 ORD, J. W.—The History and Antiquities of Cleveland. [Geology, pp. 71-80; Guisborough Spa, pp. 206, 207]. 4to. *London*.
- 12 OWEN, R.—A History of British Fossil Mammals and Birds. [Kirkdale Cavern]. 8vo. *London*.
- 13 PHILLIPS, J.—On the Remains of Microscopic Animals in the Rocks of Yorkshire. *Proc. Yorks. Geol. Soc.*, vol. ii., pp. 274-285.
- 14 SEDGWICK, A.—On Classification of Fossiliferous Slates of Cumberland, Westmorland and Lancashire. [Refers to Ribblesdale, etc.]. *Quart. Journ. Geol. Soc.*, vol. ii., p. 106.
- 15 SMITH, A.—[See 1842].
- 16 TIDAL HARBOURS COMMISSION. Second Report of the Commissioners. Parliamentary Report, vol. xviii., pt. 1, pp. 638 and plans. [Redcar, Scarborough, Whitby].

## 1847.

- 1 ANON.—[See 1840].
- 2 AKERMAN, J. Y.—An Archæological Index to Remains of Antiquity of the Celtic, Romano-British, and Anglo-Saxon Periods. [The Devil's Bolts at Boroughbridge, p. 18]. 8vo. *London*.
- 3 DAVIDSON, THOMAS.—Remarks on some species of Brachiopoda figured in plate 18 of the 'London Geological Journal.' [Includes specimens from the Yorkshire Oolites, etc.]. *The London Geol. Journ.* No. 3. May. Pp. 109-117.
- 4 DEL BAYS, J. E.—[See under C. Lyell, 1838].
- 5 CHARLESWORTH, E.—New Species of *Pentacrinus* [*P. gracilis*] in the Lias of Yorkshire. *Lond. Geol. Journ.*, p. 96.
- 6 ——— Note on *Pentacrinus gracilis* [etc.; with plate 17, '*Asterias arenicola* Goldfuss?', from the Calcareous Grit near Pickering, Yorkshire, pp. 20. *Ophiura Milleri*, in Staithes Marlstone, etc.]. *The London Geol. Journ.* No. 3, May, p. 132.
- 7 LYELL, C.—[See 1830 and 1838].
- 8 MCFARLANE, A.—Guide to Malham. [See 1908].
- 9 PHILLIPS, J.—Observations on the Process of Petrification. *Proc. Yorks. Geol. Soc.*, vol. ii., pp. 305-308.

- 10 SMITH, ALFRED.—The Harrogate Medical Guide. [See 1842].
- 11 SMITH, J. T.—On the Ventriculidæ of the Chalk ; including the description of peculiar Characters of Structure observed in their Tissues. [Yorkshire, vol. xx., pp. 79 ; ser. 2, vol. i., pp. 36, 210]. *Ann. Mag. Nat. Hist.*, vol. xx., pp. 73-97, 176-191 ; ser. 2, vol. i., pp. 36-48, 203-220, 279-295, 352-372 ; vol. ii., pp. 48-51.
- 12 TENNANT, J.—A Stratigraphical List of British Fossils, arranged under the principal divisions of British Strata, with a few elementary remarks on their character and localities. Pp. 132. 8vo. *London*.
- 13 THORP, W.—Illustrations of the Geology of the Yorkshire Coal Field. *Proc. Yorks. Geol. Soc.*, vol. ii., pp. 328-331.
- 14 WALBRAN, J. R.—[See 1844].
- 15 WHEWALL, W.—On the wave of translation in connection with the Northern Drift. *Quart. Journ. Geol. Soc.*, vol. iii., p. 227.
- 16 WILLIAMSON, W. C.—On some of the Microscopic Objects found in the Mud of the Levant, and other Deposits ; with Remarks on the Mode of Formation of Calcareous and Infusorial Siliceous Rocks. [Yorkshire, pp. 73, 84]. *Mem. Lit. Phil. Soc., Manchester*, ser. 2, vol. viii., pp. 1-128.

## 1848.

- 1 BEDELL, E. W.—An Account of Hornsea in Holderness in the East Riding of Yorkshire, Hull. Pp. 146 + 9.
- 2 CHARNOCK, J. H.—Farming of the West Riding of Yorkshire. [Geological Map and account of soils]. *Journ. Roy. Agric. Soc.*, vol. ix., pp. 284-311, and *Trans. Yorks. Agric. Soc.*, No. xi., pp. 156-181.
- 3 COOPER, B.—[See T. Ransome].
- 4 DE LA BECHE, H., and H. LYON PLAYFAIR.—First Report on the Coals suited to the Steam Navy. [Refers to South Yorkshire]. Fol. *London*. Second Report. 1849 Third Report. 1851.
- 5 FORBES, E.—On the Asteriadæ found fossil in British Strata. [Yorkshire, pp. 477, 478, 480]. *Mem. Geol. Survey*, vol. ii., part 2, pp. 457-482.



- 6 INGLIS, J.—On a New Species of Nautilus from the Halifax Coal Beds. *Rep. Brit. Assoc. for 1847*, Sections, p. 64.
- 7 LEE, EDWIN.—Baths and Watering Places of England, considered with reference to their curative efficacy with Observations on Mineral Waters, Bathing, etc. [Harrogate, pp. 37-49]. Pp. 212. 8vo. London. This is the second edition of 'The Mineral Springs of England,' 1841. Ed. 3. Pp. 280, 1854.
- 8 LEGARD, G.—[Report on the] Farming of the East Riding of Yorkshire. [Geological map and notes]. *Journ. Roy. Agric. Soc.*, vol. ix., pp. 85-136. *Trans. Yorks. Agric. Soc.*, No. xi., pp. 69-121.
- 9 MANTELL, G. A.,—[See 1838].
- 10 M'COY, F.—On some new Mesozoic Radiata. [Coralline Oolite, Malton]. *Ann. Mag. Nat. Hist.*, ser. 2, vol. ii., pp. 397-420.
- 11 MILBURN, M. M.—[Report on the] Farming of the North Riding of Yorkshire. [Small geological map and section. Analysis of limestone from Ripon]. *Journ. Roy. Agric. Soc.*, vol. ix., pp. 496-521; and *Trans. Yorks. Agric. Soc.*, No. xi., pp. 182-207.
- 12 PLAYFAIR, H. LYON.—[See H. De la Beche].
- 13 RANSOME, T., and B. COOPER.—On the Composition of some Limestones used for building purposes, especially on those employed in the erection of the new Houses of Parliament. [North Anston, Yorkshire]. *Mem. Geol. Survey*, vol. ii., pt. 2, pp. 685-702.
- 14 WOOD, S. V.—A Monograph of the Crag Mollusca with Description of Shells from the Upper Tertiaries of the British Isles. [*Dentalium entale* from Bridlington, p. 189]. Pp. xii., 208; Plates xxi. *Monogr. Pal. Soc.*, vol. i., for the year 1847.

## 1849.

- 1 BRONGNIART, A.—Exposition chronologiques des périodes de végétation et des Flores diverses qui se sont succédé à la surface de la terre. *Ann. Sci. Nat. Bot.*, ser. 3, t. xi., pp. 285-338.
- 2 BROWN, T.—Illustrations of the Fossil Conchology of Great Britain and Ireland, with descriptions and localities of

- all the species. [Many Yorkshire species]. Pp. 273, plates 98. 4to. *London*.
- 3 CHARLESWORTH, E.—On the Mineral Condition and General Affinities of the Zoophytes of the Chalk at Flamborough and Bridlington. *Proc. Yorks. Phil. Soc.*, vol. i., part 1, p. 73.
  - 4 DE LA BECHE, H.—[See 1848].
  - 5 FARRER, J. W.—On Ingleborough Cave. *Quart. Journ. Geol. Soc.*, vol. v., pp. 49-51.
  - 6 FORBES, E.—Echinodermata. [*Astropecten hastingiæ*, *Nucleolites clunicularis*]. *Mem. Geol. Survey*, dec. i., pl. ii and ix.
  - 7 LEWIS, S.—Topographical Dictionary of England. . . . [History of the Harrogate Wells]. 4to. *London*.
  - 8 M'COY, F.—On the Classification of some British Fossil Crustacea, with Notices of New Forms in the University Collection at Cambridge. [*Hoploparia prismatica* from Speeton]. *Ann. Mag. Nat. Hist.*, ser. 2, vol. iv., pp. 161-179.
  - 9 MOBERLEY, —.—(A letter describing a large Plesiosaurus discovered in the Lias at Kettlewell, near Whitby). *Rep. Brit. Assoc. for 1848*, Sections, p. 78.
  - 10 PLAYFAIR, LYON.—[See H. De la Beche. 1848].
  - 11 THORPE, W.—[See 1843].
  - 12 WILLIAMSON, W. C.—On the scaly vegetable heads or collars from Runswick Bay, supposed to belong to *Zamia gigas*. *Proc. Yorks. Phil. Soc.*, vol. i., part 1, pp. 45-70.
  - 13 ——— On the Microscopic Structure of the Scales and Dermal Teeth of some Ganoid and Placoid Fish. *Phil. Trans.*, vol. cxxxix., p. 435.
  - 14 YATES, J.—Notice of *Zamia gigas*. *Proc. Yorks. Phil. Soc.*, vol. i., part 1, pp. 37-45.

1850.

- 1 ANON.—[See 1845].
- 2 BRONGNIART, A.—Chronological Exposition of the Periods of Vegetation and the different Floras which have successively occupied the surface of the Earth. [Yorkshire, pp. 198-200]. *Ann. Mag. Nat. Hist.*, ser. 2, vol. vi., pp. 192-203, 348-370; *Edin. New Phil. Journ.*, vol.

- xlvi., pp. 320-330; vol. xlix., pp. 72-97. Translated from the French. [See A. Brongniart, 1849].
- 3 DENNY, H.—On the Fossil Flora of the Carboniferous Epoch, with especial reference to the Yorkshire Coal Field. *Proc. Yorks. Geol. Soc.*, vol. iii., pp. 1-38.
  - 4 EGERTON, P. DE M. G.—Palichthyologic Notes, No. 3. On the Ganoidei Heterocerci. [*Palæoniscus egertoni* from Yorkshire, p. 5]. *Quart. Journ. Geol. Soc.*, vol. vi., pp. 1-10.
  - 5 FORBES, E.—Echinodermata. [*Hemicidaris intermedia*]. *Mem. Geol. Survey*, dec. iii., pl. iii.
  - 6 HOWSON, W.—An Illustrated Guide to the Curiosities of Craven, with a geological Introduction [list of fossils]. 12mo. *Settle*.
  - 7 JONES, J. R.—A Monograph of the Entomostraca of the Cretaceous Formations of England. [Speeton, p. 26]. Pp. 1-40; Plates i.-vii. *Monogr. Pal. Soc.*, vol. iii., for the year 1849.
  - 8 KING, W.—A Monograph of the Permian Fossils of England. [*Monotis garforthensis*, p. 157]. Pp. xxxvii., 258; Plates xxviii. *Monogr. Pal. Soc.*, vol. iii., for the year 1849.
  - 9 LANGDALE, W.—[See Anon. 1845].
  - 10 VETCH, J.—Report [to the Admiralty] on the Breach made by the Sea Across the Spurn Point, at the entrance of the River Humber.

1851.

- 1 ANON.—Reports of the Inspectors of Mines. *Parliamentary Reports*. Fol. *London*. 1851-1894.
- 2 ARMISTEAD, WILSON.—Memoirs of James Logan. [Quotes letter dated '12 month, 8th, 1738' referring to the rocks near Scarborough, pp. 154-5]. *London*. 12mo. Pp. 192.
- 3 BUNBURY, C. J. F.—On some Fossil Plants from the Jurassic Strata of the Yorkshire Coast. *Quart. Journ. Geol. Soc.*, vol. vii., pp. 179-194.
- 4 DAVIDSON, T.—A Monograph of the British Fossil Brachipoda. Part iii. [Yorkshire, pp. 2, 9, 48]. Pp. 1-64; plates i.-xiii. *Monogr. Pal. Soc.*, vol. iv., for the year 1850.

- 5 DE LA BECHE, H. T.—The Geological Observer. [Kirkdale Cave, p. 343]. Pp. xxii. 846. 8vo. London. Ed. 2, 1853.
- 6 ——— [See 1848].
- 7 FRAAS, O.—On the Comparison of the German Jura Formation with those of France and England. [Yorkshire, pp. 55, 63, 67, 69, 72]. *Neues Jahrb. f. Min.* 1850. 2 H., pp. 138-185. *Quart. Journ. Geol. Soc.*, vol. vii., pp. 42-83.
- 8 HAIME, J.—[See H. Milne-Edwards].
- 9 LYCETT, J.—[See J. Morris].
- 10 MILNE-EDWARDS, H., and J. HAIME.—A Monograph of the British Fossil Corals. Part II. Corals from the Oolitic Formations. [Yorkshire, pp. 75-77, 83, 95, 100, 104]. Pp. 73-145; Plates xii.-xxx. *Monogr. Pal. Soc.*, vol. v. for the year 1851.
- 11 MORRIS, J., and J. LYCETT.—A Monograph of the Mollusca from the Great Oolite chiefly from Minchinhampton and the Coast of Yorkshire. Part I. Univalves. [Yorkshire, pp. vii., 18, 21, 29, 57, 96, 108-121]. Pp. v.-viii., 1-130; Plates i.-xv. *Monogr. Pal. Soc.*, vol. iv. for the year 1850.
- 12 PLAYFAIR, LYON.—[See H. De la Beche, 1848].
- 13 SORBY, H. C.—On the Excavation of the Valleys in the Tabular Hills, as shewn by the configuration of Yedman-dale, near Scarborough. *Proc. Yorks. Geol. Soc.*, vol. iii., pp. 169-172; *Quart. Journ. Geol. Soc.*, vol. x., pp. 328-333. 1854.
- 14 ——— On the Microscopic Structure of the Calcareous Grit of the Yorkshire Coast. *Quart. Journ. Geol. Soc.*, vol. vii., pp. 1-6. *Proc. Yorks. Geol. Soc.*, vol. iii., pp. 197-206.
- 15 WALBRAN, J. R.—[See 1844].
- 16 WRIGHT, T.—On the Cidaridæ of the Oolites, with a description of some new species of that family. [Yorkshire species, p. 249]. *Ann. Mag. Nat. Hist.*, ser. 2, vol. viii., pp. 241-280; *Proc. Cottesw. Nat. Club*, vol. i., pp. 120-133.
- 17 WOOD, E.—An account of a large Fossil Marine Worm occurring in the Mountain Limestone District in Wensleydale, Yorkshire. *Naturalist (Morris)*, vol. i., pp. 14, 15.

1852.

- 1 ANON.—[See 1840].
- 2 ——— Reports of the Inspectors of Mines. *Parliamentary Report*. Fol. London.
- 3 BINNEY, E. W.—On some Trails and Holes found in rocks of the Carboniferous Strata, with remarks on the *Microconchus carbonarius*. *Mem. Lit. Phil. Soc., Manchester*, ser. 2, vol. x., pp. 191-202.
- 4 DAVIDSON, T.—A Monograph of the British Cretaceous Brachiopoda. Part 2. Pp. 1-54; Plates i.-v. [Yorkshire, pp. 1, 4]. *Monogr. Pal. Soc.*, vol. vi., for the year 1852.
- 5 ——— A Monograph of the British Oolitic and Liassic Brachiopoda. Part 3. Conclusion. Pp. 65-100. Plates xiv.-xviii. [Yorkshire, pp. 76, 87]. *Monogr. Pal. Soc.*, vol. vi., for the year 1852.
- 6 DIXON, J.—Fossil Marine Worms in the Flagstone Beds of Pateley Bridge, Yorkshire. *Naturalist* (Morris), vol. ii., pp. 130, 131.
- 7 EGERTON, P. DE M. G.—[*Palæoniscus egertoni*, *Lepidotus pectinatus*, from the Lias of Whitby]. *Mem. Geol. Survey*, dec vi., plate iii., 8vo, London.
- 8 GILL, T.—Vallis Eboracensis; comprising the History and Antiquities of Easingwold and its neighbourhood. [Springs at Easingwold, p. 102; at Hovingham, p. 253]. 8vo. London.
- 9 HAIME, J.—[See H. Milne-Edwards].
- 10 LYELL, C.—[See 1838].
- 11 MAY, C.—Iron-Ore near Middlesbro'-on-Tees. *Proc. Inst. Civ. Eng.*, vol. xi., p. 28.
- 12 MILNE-EDWARDS, H., and J. HAIME.—A Monograph of British Fossil Corals. Part 3. Corals from the Permian Formation and the Mountain Limestone. Pp. 147-210; plates xxxi.-xlvi. [Yorkshire, pp. 150, 153, 156, 162, 167, 174, 180, 191, 197, 198, 200, 206]. *Monogr. Pal. Soc.*, vol. vi., for the year 1852.
- 13 SEDGWICK, A.—On the Lower Palæozoic Rocks at the Base of the Carboniferous Chain between Ravenstonedale and Ribblesdale. *Quart. Journ. Geol. Soc.*, vol. viii., pp. 35-54.

- 14 SORBY, H. C.—On the Contorted Stratification of the Drift of the Coast of Yorkshire. *Proc. Yorks. Geol. Soc.*, vol. iii., pp. 220-224.
- 15 ——— On the Direction of Drifting of the Sandstone Beds of the Oolitic Rocks of the Yorkshire Coast. *Proc. York. Phil. Soc.*, vol. i., pp. 111-113.
- 16 SMITH, HENRY ECROYD.—*Reliquiæ Isurianæ*: The Remains of Roman Isurium (now Aldborough, near Boroughbridge, Yorkshire), illustrated. [Devil's Arrows pp. 7-9]. 4to. London. Pp. 66.
- 17 WIGGINS, J.—The Practice of Embanking Lands from the Sea, treated as a means of profitable employment of capital; with examples and particulars of actual embankments, and also practical remarks on the repair of old sea-walls. [The formation of Sunk Island, pp. 193, 194]. Pp. xii., 238. 12mo. London.
- 18 WRIGHT, T.—On the Cassidulidæ of the Oolites, with descriptions of some new Species of that family. [Yorkshire species, pp. 89-91, 94-96, 212-214, 297-302, 306-308, 310, 311, 313-315]. *Ann. Mag. Nat. Hist.*, ser. 2, vol. ix., pp. 81-103, 206-214, 294-316.

1853.

- 1 ANON.—Reports of the Inspectors of Mines. *Parliamentary Report*. Fol. London.
- 2 BELCHER, H.—[See G. Merryweather].
- 3 CAMPBELL, W.—[See G. Merryweather].
- 4 DAVIDSON, T.—British Fossil Brachiopoda. Vol. i. Tertiary, Cretaceous, Oolitic, and Liassic Species. With a General Introduction, 1851-55. Pp. 1-136. Plates i.-ix. *Monogr. Pal. Soc.*, vol. vii., for the year 1853.
- 5 DE LA BECHE, H. T.—[See 1851].
- 6 HALL, T. Y.—The Extent and Probable Duration of the Northern Coal Field. [Contains a report on the Ironstone]. *Trans. N. Inst. Mining Eng.*, vol. ii., pp. 104-235.
- 7 HENDERSON, JOHN. Report upon the Rye and Derwent Drainage in a letter . . . to Mr. Pusey. *Journ. Royal Agric. Soc.*, vol. xiv., pt. 1. 8vo., 26 pp. [See 1860].

- 8 KENNION, G.—Observations on the Medicinal Springs of Harrogate. (Extracted from the *Medical Times and Gazette*). Ed. 4. Pp. 31. 8vo. *London*. This forms an appendix to the Illustrated Handbook for Harrogate, 1858. Ed. 5. Pp. 35, 1863. Ed. 6, 1869. Ed. 7, enlarged and revised by A. BEALEY, 8vo. *London*, 1869. It is also appended to Hollin's Handbook for Harrogate [1872].
- 9 LYCETT, J.—[See J. Morris].
- 10 LYELL, C.—[See 1830 and 1838].
- 11 MERRYWEATHER, G.—A Lecture on Gold and Iron, and Iron Ore, with especial reference to the Ironstone of the Vale of Esk, Staithes and Cleveland. Pp. iv., 36 and map. [W. CAMPBELL: 'A notice of the Iron district, lately discovered in the Cleveland Hills, in the North Riding of the County of York, with specimens of the Ores,' pp. 37-43. A. ROSE: 'Report on Mr. Campbell's "Notice of the iron district lately discovered on the Cleveland Hills, in the North Riding of the County of York, with specimens of the Ores."'; read before Roy. Scot. Soc. Arts, March 1852,' pp. 44-46. H. BELCHER and others: 'A Report of the Speeches delivered after the conclusion of Dr. Merryweather's Lecture,' pp. 59-83]. 16mo. *London*.
- 12 ——— A Lecture on Gold and Iron, and Iron Ore, with especial reference to the Ironstone of the Vale of Esk, of Staithes, and Cleveland, delivered before the Whitby Literary and Philosophical Society, on Tuesday, March 29th. 12mo. Pp. 86.
- 13 MORRIS, J.—On some Sections in the Oolitic District of Lincolnshire. [Comparison with Yorkshire]. *Quart. Journ. Geol. Soc.*, vol. ix., pp. 317-344.
- 14 ——— and J. LYCETT.—A Monograph of the Mollusca from the Great Oolite, chiefly from Minchinhampton and the Coast of Yorkshire. Part 2, Bivalves. [Yorkshire, pp. 12, 32, 43]. Pp. 1-80. Plates i.-viii. *Monogr. Pal. Soc.*, vol. vii., for the year 1853.
- 15 PHILLIPS, J.—Geological Sketches around Ingleborough. *Proc. Roy. Inst.*, vol. i., pp. 278-280.

- 16 PHILLIPS, J.—The Rivers, Mountains and Sea-coast of Yorkshire. 8vo. *London*. Ed. 2, 1855.
- 17 ——— A Map of the Principal Features of the Geology of Yorkshire, by John Phillips. Scale 5 miles to 1 inch (with section of strata). [Ed. 2 1862].
- 18 ——— Excursions in Yorkshire by the North Eastern Railway [from York, Hull and Leeds]. Pp. 88. 12mo. *York*. Ed. 2, 1854. Ed. 3, 1855.
- 19 ——— On some of the Relations of Archæology to Physical Geography in the North of England. *Arch. Journ.*, vol. x. (No. 39, Sept. 1853), pp. 179-186. Reprinted 1854.
- 20 PIGGOTT, G. W. (G. W. ROYSTON PIGOTT).—On the Harrogate Spas: A handbook to the Nature and Uses of the Waters, with a brief commentary on the Medical action of the saline combinations exhibited in Professor Hofmann's analytical report. Ed. 1 and 2. 8vo. *London*, 1853. Ed. 3. Pp. 77. 8vo. 1855. New and enlarged Ed. Pp. 280. 12mo. *London*, 1856. Ed. 4. 8vo. 1865.
- 21 ROSE, A.—[See G. Merryweather].
- 22 SEDGWICK, A.—Geology of the Lake District of Cumberland, Westmorland and Lancashire in Letters addressed to W. Wordsworth. Pp. 104. 12mo. *Kendal*. Ed. 1, 1842? Ed. 2, 1843. Two additional Letters in this edition.
- 23 SORBY, H. C.—On the Microscopical Structure of some British Tertiary and Post-Tertiary Freshwater Marls and Limestones. [Holderness]. *Quart. Journ. Geol. Soc.*, vol. ix., pp. 344, 346.
- 24 THORPE, W.—On the Diluvial and Gravel Beds of Yorkshire and Nottinghamshire. *Proc. Yorks. Geol. Soc.*, vol. iii., pp. 244-252.
- 25 WEST, T.—On certain Cavities in the Limestone District of Craven. *Ibid.*, pp. 240-244.
- 26 WOODS, S. V.—A Monograph of the Crag Mollusca, with Description of Shells from the Upper Tertiaries of the British Isles. [Part 2, No. 2]. Pp. 151-216. Plates xiii.-xx. [Bridlington, pp. 168, 176, 179, 182, 183, 184, 196]. *Monogr. Pal. Soc.*, vol. vii., for the year 1853.
- 27 WORDSWORTH, W.—[See A. Sedgwick, and also under 1843].



1854.

- 1 ANON.—The Visitor's Guide to Ripon, Harrogate and adjoining country, including Fountains Abbey, Brimham, Bolton, Hackfall, Knaresborough and other places of interest : with appendix containing Hofmann's analysis. 8vo. *Ripon*. Pp. 113. Another Ed., 1856. Pp. 120. Another Ed., 1858.
- 2 ——— Reports of the Inspectors of Mines. *Parliamentary Report*. Fol. *London*.
- 3 BELL, J. P.—Observations on the Character and Measurements of Degradation of the Yorkshire Coast. *Rep. Brit. Assoc.*, for 1853, pp. 81-84.
- 4 CHARLESWORTH, E.—Notice of the curious Spiral Body in certain Fossil Sponges, and of several other remarkable Fossils from the Yorkshire Strata. [An Inoceramus and a coprolite from the Lias]. *Ibid.*, Sections, p. 51.
- 5 DENNY, H.—On the Discovery of the Hippopotamic and other Remains in the Neighbourhood of Leeds. *Ibid.*, pp. 51, 52, and *Proc. Yorks. Geol. Soc.*, vol. iii., pp. 321-336.
- 6 HOFMANN, A. W.—Harrogate and its Resources. Chemical Analysis of its Medicinal Waters, with an Appendix on the mode of their Administration by the Committee. [Report to the Harrogate Water Committee]. Pp. 54. 8vo. *London*.
- 7 ——— Synopsis of the Analyses of the Mineral Springs of Harrogate, extracted from Dr. Hofmann's Report, with practical remarks, by the Medical Section of the Water Committee. Pp. 16. 8vo. *London*.
- 8 JONES, T. R. [Edited by].—The Medals of Creation, by G. A. Mantell. [See G. A. Mantell, 1844].
- 9 KEMP, G. G.—On the Waste of the Holderness Coast. *Rep. Brit. Assoc.*, for 1853, Sections, p. 53.
- 10 KNIPE, J. A.—Geological Map of the British Isles and Part of France, showing the inland Navigation, by means of Rivers and Canals, the Railways and Principal Roads, and Sites of the Minerals.
- 11 KONINCK, L. G. DE and H. LE HON.—Recherches sur les Crinoides du terrain carbonifère de la Belgique. [*Zea-crinus calyx*, n. sp. from English Lower Carboniferous.

- Supplement, 1854, describes *Woodocrinus macrodactylus* from Richmond]. *Bruxelles Acad. Soc. Mem.*, t. xxviii.
- 12 LEE, E.—The Watering Places of England, considered with reference to their Medical Topography. 12mo. *London*. This is the third edition of 'The Mineral Springs of England,' 1841.
- 13 MANTELL, G. A.—[See 1844].
- 14 ——— [See T. R. Jones].
- 15 MORRIS, J.—[See 1843].
- 16 MURCHISON, R. I.—Siluria. The History of the Oldest known Rocks containing Organic Remains; with a brief sketch of the Distribution of Gold over the Earth. [Permian rocks, p. 303; Ed. 3, p. 348; Ed. 4, p. 329]. 8vo. *London*. Ed. 3, 1859. Ed. 4, 1867.
- 17 OLDHAM, J.—On the Physical Features of the Humber. [Map and section of a boring at Sunk Island, pl. 2]. *Rep. Brit. Assoc.*, for 1853, pp. 36-45.
- 18 Ordnance Survey Map, Yorkshire. Scale 6 inches to 1 mile. Sheets 128, 129, 146, 163, 180, 197, 212, 213, 228, 242, 243, 257, 269, 269A, surveyed in 1852-53. [Noted as showing position of coast line at this date].
- 19 PHILLIPS, J.—On a new Plesiosaurus in the York Museum. *Rep. Brit. Assoc.* for 1853. Sections, p. 54.
- 20 ——— On Magnetic Phænomena in Yorkshire. *Proc. Yorks. Phil. Soc.*, pp 21.
- 21 ——— On Magnetic Phenomena in Yorkshire. [Vale of York]. *Rep. Brit. Assoc.* for 1853. Sections, p. 6.
- 22 ——— On the Dispersion of Erratic Blocks at higher Levels than their Parent Rock in Yorkshire. *Ibid.*, p. 54.
- 23 ——— Excursions in Yorkshire by the North Eastern Railway. Pp. 88. 2nd Ed. [See 1853].
- 24 ——— On Some of the Relations of Archæology to Physical Geography in the North of England. [Reprint: see under 1853].
- 25 PIGGOTT, G. W.—The Harrogate Spas: The Chloridal Steel Waters or Saline Chalybeates. Ed. 2. Pp. 36. 8vo. *London*.
- 26 SEDGWICK, A.—On the Classification and Nomenclature of the older Palæozoic Rocks of Britain. *Rep. Brit. Assoc.* for 1853. Sections, pp. 54-61.

- 27 SOLLIT, J. D.—On the Chemical Constitution of the Humber Deposits. *Report Brit. Assoc.* for 1853, p. 19.
- 28 SORBY, H. C.—On Yedmandale as illustrating the Excavation of some Valleys in the Eastern Part of Yorkshire. *Quart. Journ. Geol. Soc.*, vol. x., pp. 328-333. [See 1851].

1855.

- 1 ANON.—Reports of the Inspectors of Mines. *Parliamentary Report*. Fol. London.
- 2 ASPLAND, T. L.—[See Harriet Martineau].
- 3 BANKS, W.—[See Harriet Martineau].
- 4 BINNEY, E. W.—On the Permian Beds of the North West of England. [Kirkby Stephen and Brough]. *Mem. Manchester Lit. Phil. Soc.*, ser. 2, vol. xii., pp. 209-269.
- 5 DAVIDSON, T.—A Monograph of the British Cretaceous Brachiopoda. Part 2. No. 2. Cretaceous, with Appendix and Index to vol. i. Pp. 55-117. Plates vi.-xii. [Speeton and Knapton, pp. 87, 99]. *Monogr. Pal. Soc.*, vol. viii., for the year 1854.
- 6 HENWOOD, G.—Four Lectures on Geology and Mining, read at the Mechanics' Institutions, Leeds, Hull, Bradford, Harrogate, etc. Introductory Lecture: 'On the study of Geology and Mineralogy as sources of interesting and valuable information.' [Clapham Cave, pp. 10-13]. 8vo. London.
- 7 HOFMANN, A. W.—Chemical Analysis of the Mineral Waters of Harrogate. [Report to the Harrogate Water Committee]. *Journ. Chem. Soc.*, vol. vii., pp. 161-179; *Pharm. Journ.*, vol. xiv., No. ii., pp. 74-77, No. 3, pp. 118-125; *Erdm. Journ. Prakt. Chem.*, bd. lxiv., pp. 221-225; *Liebig. Annal. Chem. Pharm.*, bd. xciii., pp. 286-310.
- 8 HUNT, R.—Memoirs of the Geological Survey of Great Britain and the Museum of Practical Geology. Mineral Statistics . . . 8vo. London, 1855-1881. [See also Anon, 1884, 1895, 1897].
- 9 KNOX, R.—Descriptions Geological, Topographical, and Antiquarian, in Eastern Yorkshire between the rivers Humber and Tees, with trigonometrically surveyed map extending twenty-five miles from Scarborough, accom-

- panied by a map of all Yorkshire, two of England, and eighteen more descriptive plates of diagrams, etc. [Geology, pp. 1-50]. 8vo. *London*. Pp. xiv.+210.
- 10 LECKENBY, J.—On the Geological Position of certain Clay Beds in Filey Bay, hitherto referred to the Cretaceous Group, and the probable existence of extensive deposits of Oxford Clay and Lias at a former period. *23rd Report Scarborough Phil. Soc.*, p. 49.
  - 11 LYCETT, J.—[See J. Morris].
  - 12 M'COY, F.—[See A. Sedgwick].
  - 13 MARTINEAU, HARRIET.—A Complete Guide to the English Lakes illustrated from drawings by T. L. Aspland and W. Banks, and a Map, coloured Geologically, by JOHN RUTHVEN. . . . Pp. iii., 233, and map. 8vo. *Windermere*. Ed. 2. Pp. 210. 8vo. *Windermere*, 1855. Another Edition. 4to. 1858.
  - 14 MORRIS, J., and J. LYCETT.—A Monograph of the Mollusca from the Great Oolite chiefly from Minchinhampton and the Coast of Yorkshire. Part 3. Bivalves. [Yorkshire, pp. 81, 82, 87, 93, 94, 97, 114, 115, 123, 125, 126-142]. Pp. 81-147. Plates ix.-xv. *Monogr. Pal. Soc.*, vol. viii., for the year 1854.
  - 15 MURRAY, P.—The Minerals of Scarborough. *Rep. Scarborough Phil. Soc.*, p. 25.
  - 16 PHILLIPS, J.—On a part of the Yorkshire Coast in the later Geological Periods. *Proc. Ashmol. Soc.*, No. 33, pp. 80-82.
  - 17 ——— Manual of Geology: practical and theoretical. Pp. xii., 669. 8vo. *London and Glasgow*.
  - 18 ——— The Rivers, Mountains, and Sea-coast of Yorkshire. Ed. 2. 320 pp. and 35 plates. (1st Ed. in 1853).
  - 19 ——— Excursions in Yorkshire by the North Eastern Railway. 3rd Ed. Pp. 88. [See 1853].
  - 20 ——— Lecture on 'Some Peculiar Phenomena in the Geology and Physical Geography of Yorkshire.' Pp. 20-27 of vol. i. of Sheahan and Whellan's History and Topography of the City of York. 8vo. *Beverley*.
  - 21 ——— [See 1853].
  - 22 PIGGOTT, G. W.—On the Harrogate Spas. 2nd Ed. [See under 1853].
  - 23 RUTHVEN, JOHN. [See Harriet Martineau].

- 24 SEDGWICK, A.—A Synopsis of the British Palæozoic Rocks, with a Systematic Description of the British Palæozoic Fossils in the Museum of the University of Cambridge by Prof. F. M'COY. 4to. *London and Cambridge*.
- 25 SHEAHAN, J. J., and T. WHELLAN.—History and Topography of the City of York; the Ainsty Wapentake; and the East Riding of Yorkshire. [Extracts from a newspaper account of a lecture by J. PHILLIPS given at Hull in 1853, entitled 'Some Peculiar Phenomena in the Geology and Physical Geography of Yorkshire,' pp. 20-27. Harrogate Springs, p. 35]. 2 vols. 8vo. *Beverley*. Vol. iii., by J. J. SHEAHAN, 1871].
- 26 SIMPSON, M.—The Fossils of the Yorkshire Lias, described from Nature, with a short outline of the Yorkshire Coast. Pp. 149. 16mo. *London*. Ed. 2 in 1884. [See also M. Simpson, 1859].
- 27 TAYLOR, H.—Analyses of the Rocks of the Coal Formations. [Cleveland, p. 24]; *Trans. N. Inst. Mining Eng.*, vol. iii., pp. 11-25.
- 28 WHELLAN, T.—[See J. J. Sheahan].
- 29 WILLIAMSON, W. C.—On the Restoration of *Zamites gigas* from the Lower Sandstone and Shale of the Yorkshire Coast. *Rep. Brit. Assoc.* for 1854. Sections, pp. 103-104

1856.

- 1 ANON.—The Visitor's Guide to Ripon, etc. 2nd Ed. [See under 1854].
- 2 ANON, E. W[OOD].—Geological Excursion. [N.W. Yorkshire and Lancashire]. *Naturalist* (Morris), vol. vi., pp. 1-6, 25-20.
- 3 ——— Reports of the Inspectors of Mines. *Parliamentary Report*. Fol. *London*.
- 4 AUSTEN, R. A. C. GODWIN.—On the Possible Extension of the Coal-measures beneath the South-Eastern Part of England. *Quart. Journ. Geol. Soc.*, vol. xii., pp. 38-73.
- 5 BARKER, W. G. M. JONES.—Historical and Topographical Account of Wensleydale and the Valley of the Yore in the North Riding of Yorkshire. Ed. 2. 8vo. *London*.
- 6 BLACKWELL, J. K.—The present position of the Iron Industry of Great Britain, with reference to that of other

- countries. [Yorkshire, p. 68]. *Journ. Soc. Arts*, vol. iv., pp. 65-73, 113-126.
- 7 CROWDER, W.—On the Chemical Composition of the Cleveland Ironstone Beds. *Edin. New Phil. Journ.*, ser. 2, vol. iii., pp. 286-296.
- 8 DICK, A.—Analysis of the Cleveland Iron-Ore from Eston. *Quart. Journ. Geol. Soc.*, vol. xii., pp. 357, 358.
- 9 — [See W. W. Smyth].
- 10 HUGARD.—[See under C. Lyell, 1838].
- 11 PIGGOTT, G. W.—On the Harrogate Spas. New and Enlarged Ed. 280 pp. [See under 1853].
- 12 HUGHES, S.—A Treatise on Waterworks for the Supply of Cities and Towns; with a Description of the principal Geological Formations of England as influencing the Supplies of Water. [Yorkshire, pp. 94, 95]. 8vo. London. Ed. 2, by A. SILVERTHORNE, 1872. Another Ed., 1879. Another Ed., 1882.
- 13 LYELL, C.—[See under 1838].
- 14 OPPEL, A.—Die Juraformation Englands, Frankreichs und des Südwestlichen Deutschlands. 8vo. Stuttgart, 1856-58.
- 15 SALTER, J. W.—Echinodermata. [*Diadema pseudodiadema*; *Echinus perlatus*; *Pygaster semisulcatus*]. *Mem. Geol. Survey*, dec. v.; pls. ii., iv., vii.
- 16 SMYTH, W. W., and others.—The Iron Ores of Great Britain. Part 1. 'The Iron Ores of the North and North Midland Counties of England.' Analyses by A. DICK. Pp. 97. *Mem. Geol. Survey*. 8vo. London.
- 17 THORP, W.—On the Ironstones in the Oolite District of Yorkshire. *Proc. Yorks. Geol. Soc.*, vol. iii., pp. 394-400.
- 18 WALBRAN, J. R.—[See 1844].
- 19 W[OOD], E.—[See Anon].
- 20 WRIGHT, T.—On the Palæontological and Stratigraphical Relations of the so-called 'Sands of the Inferior Oolite.' [Yorkshire, p. 294]. *Quart. Journ. Geol. Soc.*, vol. xii., pp. 292-325.

1857.

- 1 ANON.—Reports of the Inspectors of Mines. *Parliamentary Report*. Fol. London.

- 2 BINNEY, E. W.—Additional Observations on the Permian Beds of the North-west of England. [Kirkby Stephen and Brough]. *Mem. Lit. Phil. Soc., Manchester*, ser. 2, vol. xiv., pp. 101-120.
- 3 CROWDER, W.—An Attempt to determine the Average Composition of the Rosedale, Whitby, and Cleveland Ironstones. *Edin. New Phil. Journ.*, ser. 2, vol. v., pp. 35-53.
- 4 ——— The Chemistry of the Iron Manufacture of Cleveland District. *Ibid.*, pp. 264-276, and vol. vi., pp. 234-256.
- 5 DURANT-FARDEL, M.—*Traité thérapeutique des eaux minérales de France et de l'Etranger, et de leur emploi dans les maladies chroniques*. [Harrogate, p. 113]. 8vo. *Paris*. Ed. 2. Pp. 773. 8vo. *Paris*, 1862. Ed. 3., 1883.
- 6 FAIRBAIRN, W.—On the Comparative Value of various kinds of Stone, as exhibited by their Powers of Resisting Compression. [Bradford, Anston, etc.]. *Mem. Lit. Phil. Soc., Manchester*, ser. 2, vol. xiv., pp. 31-48.
- 7 GLOVER, R. M.—On Mineral Waters: their Physical and Medicinal Properties with descriptions of the different mineral waters of Great Britain and the Continent, and directions for their administration. [Harrogate, pp. 72-91]. Pp. 375. 8vo. *London and Edinburgh*.
- 8 JONES, T. R.—Note on *Estheria minuta*. [Alludes to *Estheria* in the Upper Shale of Scarborough]. *Quart. Journ. Geol. Soc.*, vol. xii., pp. 376. 377. *Ann. Mag. Nat. Hist.*, ser. 2, vol. xix., pp. 104-106.
- 9 ——— A Monograph of the Tertiary Entomostraca of England. [Bridlington, pp. 29, 44]. Pp. x., 68; plates vi. *Monogr. Pal. Soc.*, vol. ix., for the year 1855.
- 10 ——— [See under Mantell, 1838].
- 11 JUKES, J. B.—The Student's Manual of Geology. 12mo. *Edinburgh*. Ed. 2. Pp. xx., 764. 8vo. *Edinburgh*, 1862. Ed. 3. by A. Geikie. Pp. xx., 778. 8vo. *Edinburgh*, 1872.
- 12 LYCETT, J.—Notes on the genus *Quenstedtia*. [Yorkshire Dogger]. *Ann. Mag. Nat. Hist.*, ser. 2, vol. xix., pp. 53, 54.
- 13 ——— On the Sands intermediate the Inferior Oolite and Lias of the Cotteswold Hills, compared with a similar deposit upon the Coast of Yorkshire. *Ann. Mag. Nat. Hist.*, vol. xx., pp. 170-177.

- 14 LYCETT, J.—Note on the Presence of the Fossil genus *Isodonta* Bav., in the English Jurassic Rocks. [Cornbrash and Coralline Oolites]. *Ann. Mag. Nat. Hist.*, pp. 367, 368.
- 15 — The Cotteswold Hills. Handbook introducing to their Geology and Palæontology. [The Cynocephala Stage in Yorkshire, pp. 140-141]. Pp. 168; pls. vii. 8vo. *London and Stroud*.
- 16 LYELL, C.—[See 1838].
- 17 MANTELL, G. A.—[See 1838].
- 18 MARCOU, J.—Lettres sur les Roches du Jura et leur Distribution Géographique dans les deux Hémisphères. [Notice on William Smith, pp. 347-359]. Pp. 364. 8vo. *Paris*, 1857-1860.
- 19 MARLEY, J.—Cleveland Ironstone. Outline of the Main or Thick Stratified Bed, its Discovery, Application, and Results, in connection with the Iron-works in the North of England. *Trans. N. Inst. Mining Eng.*, vol. v., pp. 165-219. Sections 9 and maps 3. Discussion, vol. vi., pp. 7, 187-196 (1858).
- 20 SEDGWICK, A. [See 1843].
- 21 SHEAHAN, J. J. and T. WHELLAN.—History and Topography of the City of York; the East Riding of Yorkshire; and a portion of the West Riding. Vol. i., 8vo., pp. 786; vol. ii., pp. 674.
- 22 SORBY, H. C.—On the Origin of the Cleveland Hill Ironstone. *Proc. Yorks. Geol. Soc.*, vol. iii., pp. 457-461.
- 23 TEALE, T. P.—On some Works of Man associated with the Remains of Extinct Animals, in the Aire Valley Deposit. *Proc. Yorks. Geol. Soc.*, vol. iii., pp. 482-489.
- 24 WALBRAN, J. R.—[See 1844].
- 25 WHELLAN, T.—[See J. J. Sheahan].
- 26 WOOD, N.—An Account of the Explosion of Fire-damp at the Lundhill Colliery [near Barnsley]. Section. *Trans. N. Inst. Mining Eng.*, vol. v., pp. 231-274.
- 27 WOODALL, [J. W.].—On the Evidence of a Reef of Lower Lias Rock, extending from Robin Hood's Bay to the neighbourhood of Flamborough Head. *Rep. Brit. Assoc.*, for 1856. Sections, p. 80.
- 28 WORDSWORTH, W.—[See 1843].



- 29 WRIGHT, T.—A Monograph of the British Fossil Echinodermata of the Oolitic Formations. Vol. i. The Echinoidea. [Yorkshire, pp. 123, 163, 164, 268, 318-322, 337-343, 350-352, 382-385, 395-397, 403-408, 456-463]. Pp. x.+468; plates i.-xliii. *Monogr. Pal. Soc.*, vol. ix., for the year, 1855.

1858.

- 1 ANON.—The Visitor's Guide to Ripon, etc. [See 1854].  
 2 ——— [G. W.]—On Fish Remains in the Yorkshire Coal-field. *Geologist*, vol. i., p. 54.  
 3 ——— Fairry Cave in Swaledale. *Ibid.*, p. 445.  
 4 ——— The Illustrated Hand-Book for Harrogate, with excursions in the neighbourhood. [Observations on the medicinal springs of Harrogate by Dr. G. KENNION, p. 93]. Pp. 168. 8vo. *Harrogate*. A later edition, 1872, published by T. HOLLINS, as Hollins' Handbook for Harrogate.  
 5 ——— Reports of the Inspectors of Mines. *Parliamentary Reports* Fol. London.  
 6 BAINES, S.—[See 1859].  
 7 BLACK, A. and C.—Picturesque Guide to Yorkshire. [Mineral Water Analyses]. Pp. 276. 8vo. *Edinburgh*. Many editions.  
 8 BEWICK, J.—Remarks on the Ore and Ironstone of Rosedale Abbey. *Trans. N. Inst. Mining Eng.*, vol. vi., pp. 15-20; Discussion and additional notes, pp. 187-196.  
 9 BROWN, JOHN.—On Dumb Drifts and Fresh Air in Furnaces. [Oaks Colliery]. *Trans. S. Yorks. Viewers' Assoc.*, vol. i., p. 23; 3 pls.  
 10 DAVIDSON, T.—A Monograph of the British Fossil Brachiopoda. Part V. The Carboniferous Brachiopoda. Pp. 1-48; plates i.-viii. [Yorkshire, pp. 3, 13, 15, 18, 21, 24, 27, 29, 31, 32, 43, 46]. *Monogr. Pal. Soc.*, vol. x., for the year 1856.  
 11 EGERTON, P. DE M. G.—[*Macropoma egertoni* from Speeton]. *Mem. Geol. Survey*, dec. ix., pl. x.  
 12 GATTY, ALFRED.—Withernsea: Including an historical sketch of the Ancient Manor of Withernsea, and of the Sister Churches of Withernsea and Owthorne. *Hull*. 4to. Pp. 16.

- 13 HANCOCK, A.—Remarks on certain Vermiform Fossils found in the Mountain Limestone Districts of the North of England. *Ann. Mag. Nat. Hist.*, ser. 3, vol. ii., pp. 443-457; *Trans. Tyneside Nat. Field Club*, vol. iv., pp. 17-34; *Rep. Brit. Assoc.* for 1858, Sections, pp. 80, 81.
- 14 KENNION, G.—Observations on the Medicinal Springs of Harrogate. [Appendix to Illustrated Handbook for Harrogate]. See 1853.
- 15 KONINCK, L. G. DE.—Sur quelques crinoides palæozoïques nouveaux de l'Angleterre et d'Écosse. *Bruxelles Acad. Sci. Bull.*, t. iv., pp. 93-108.
- 16 — and E. WOOD.—On the new genus Woodocrinus. *Rep. Brit. Assoc.* for 1857, Sections, pp. 76-78. *Geologist*, vol. 1., pp. 12-15.
- 17 LINTON, W. J.—[See Harriet Martineau].
- 18 LISTER, T.—A Sketch of Barnsley; its Mineral and Manufacturing Products, and Natural History [Coals, etc.]. *Proc. Yorks. Geol. Soc.*, vol. iii., pp. 580-587.
- 19 MACKIE, S. J.—Gems from Private Collections. *Ammonites communis*, from the Lias of Whitby, Yorkshire. *Geologist*, vol. i., pp. 110-113.
- 20 MADDISON, R. R.—On the South Yorkshire Coalfield. *S. Yorks. Viewers' Assoc.*, vol. i., pp. 35-44.
- 21 MARLEY, J.—[See 1857].
- 22 MARTINEAU, HARRIET.—The English Lakes, illustrated with steel engravings, woodcuts by W. J. Linton, outlines of the mountains, and a map coloured geologically by JOHN RUTHVEN, to which is added . . . an outline of its Geology and Mineralogy . . . [Geology and Mineralogy, pp. 167-173, and map.] Pp. 173. 4to. *Windermere*. [See 1855].
- 23 NORWOOD, T. W.—The Comparative Geology of Hotham, near South Cave, Yorkshire. *Rep. Brit. Assoc.* for 1858, Sections, pp. 96, 97. *Geologist*, vol. i., 420-424, 472-479.
- 24 PHILLIPS, J.—On some Comparative Sections in the Oolitic and Ironstone Series of Yorkshire. *Quart. Journ. Geol. Soc.*, vol. xiv., pp. 84-98.
- 25 ROTUREAU, A.—Des principales eaux minerales de l'Europe [See 1864].

- 26 RUTHVEN, JOHN.—[See Harriet Martineau].
- 27 SORBY, H. C.—On the Crag Deposit at Bridlington, and the Microscopic Fossils occurring in it. *Proc. Yorks. Geol. Soc.*, vol. iii., pp. 559-562.
- 28 ——— On the Ancient Physical Geography of the South-East of England. [Permian and Oolite of Yorkshire]. *Edin. New Phil. Journ.*, ser. vol. vii., pp. 226-237.
- 29 TINDALL, E.—[Elephant remains at Bridlington]. *Geologist*, vol. i., p. 493.
- 30 WHITE, W.—A month in Yorkshire. [Some geological notes]. Pp. xv., 272. [Ed. 4, 1861. Account of Alum Works, p. 98]. 8vo. *London and Norwich*.
- 31 WOOD, E.—[See L. G. de Koninck].
- 32 WRIGHT, T.—A Monograph of the British Fossil Echinodermata from the Oolitic Formations. Vol. i., part 2, containing the Diademadae, Echinidae, Saleniadae and Echinoconidae. [Yorkshire, pp. 188, 206, 207, 252, 268, 278, 286]. Pp. 155-302; plates xi.-xxii. *Monogr. Pal. Soc.*, vol. x. for the year 1856.

1859.

- 1 ANON [W.].—The Deposition of Warp. *Geologist*, vol. ii., p. 490.
- 2 ——— Reports of the Inspectors of Mines. *Parliamentary Report*. Fol. *London*.
- 3 ARMITAGE, W. J.—On a Few Facts connected with the Manufacture of Pig Iron in the neighbourhood of Leeds. [Coal seams]. *Rep. Brit. Assoc.* for 1858. Sections, pp. 204, 205.
- 4 BAINES, S.—On the Yorkshire Flagstones and their Fossils. *Rep. Brit. Assoc.* for 1858, Sections, p. 78. *Proc. Yorks. Geol. Soc.*, vol. iii., pp. 663-666; Abstract in *Geologist*, vol. i., p. 537 (1858).
- 5 BONNEY, T. G.—[See T. Wiltshire].
- 6 CARRINGTON, —.—On the Geological Distribution of Plants in some Districts of Yorkshire. [Craven]. *Rep. Brit. Assoc.* for 1858, Sections, p. 115.
- 7 EDDY, S.—On the Lead Mining Districts of Yorkshire. *Rep. Brit. Assoc.* for 1858, pp. 167-174. *Proc. Yorks. Geol. Soc.*, vol. iii., pp. 657-663.

- 8 GRAINGE, W.—The Vale of Mowbray: A Historical and Topographical Account of Thirsk and its neighbourhood. [Geological Map]. 8vo. *London*.
- 9 HANCOCK, A.—Remarks on certain Vermiform Fossils found in the Mountain Limestone Districts of the North of England. [Wensleydale and Pateley Bridge]. *Rep. Brit. Assoc.* for 1858, Sections, pp. 80, 81.
- 10 HOBKIRK, C. P.—Huddersfield: its History and Natural History. [Geology, chap. v.]. 8vo. *Huddersfield*. Ed. 2. 1868.
- 11 HUGGON, W.—On the Alkaline Waters of Leeds. [Analysis of water at Holbeck]. *Rep. Brit. Assoc.* for 1858, Sections, pp. 51, 52.
- 12 LECKENBY, J.—On the Kelloway Rock of the Yorkshire Coast. *Quart. Journ. Geol. Soc.*, vol. xv., pp. 4-15, pls. i.-iii. Also in *27th Rep. Scarborough Phil. and Arch. Soc.* for 1858, pp. 15-29, 3 plates.
- 13 ——— Note on the Speeton Clay of Yorkshire. *Geologist*, vol. ii., pp. 9-11.
- 14 LEE, EDWIN.—[See 1841].
- 15 MURCHISON, R. I.—Siluria. [See 1854].
- 16 NORMAN, GEORGE.—List of Diatomaceae occurring in the neighbourhood of Hull. [Includes records from the peat, etc.]. Pp. 1-23.
- 17 OWEN, R.—A Monograph of the Fossil Reptilia. [See 1861].
- 18 ROTUREAU, A.—Des principales eaux minérales de l'Europe. [See 1864].
- 19 SIMPSON, M.—A Guide to the Geology of the Yorkshire Coast. New Edition called Ed. 3. Another edition, called Ed. 4 in 1868. [This is merely a reprint of the stratigraphical details from 'The Fossils of the Yorkshire Lias,' published in 1855. 16mo. *London*].
- 20 SORBY, H. C.—On the Currents present during the Deposition of the Carboniferous and Permian Strata in South Yorkshire and North Derbyshire. *Rep. Brit. Assoc.* for 1858, Sections, p. 108.
- 21 ——— On the Structure and Origin of the Millstone Grit in South Yorkshire. *Proc. Yorks. Geol. Soc.*, vol. iii., pp. 669-675.

- 22 TEALE, T. P.—On the Superficial Deposits of the Valley of the Aire at Leeds. *Rep. Brit. Assoc.* for 1858, Sections, pp. 111-113.
  - 23 TROLLOPE, E.—On the Alluvial Lands and Submarine Forests of Lincolnshire. [Hatfield Chase, p. 641, etc.]. *Proc. Yorks. Geol. Soc.*, vol. iii., pp. 637-654.
  - 24 WILSON, T.—Notice of the Discovery of a British Dagger found at Woodnook, near Wakefield. [Alluvial section]. *Proc. Yorks. Geol. Soc.*, vol. iii., pp. 654-657.
  - 25 WILTSHIRE, T.—On the Red Chalk of England. *Geologist*, vol. ii., pp. 261-278. See also note by T. G. BONNEY, p. 417. Reprinted separately (with Plates), for the *Geol. Assoc.*
  - 26 WOOD, E.—Notes of a Geological Tour in Wharfedale. *Geologist*, vol. ii., p. 445-449.
  - 27 WOOD, N.—On the Deposit of Magnetic Ironstone in Rosedale. *Trans. N. Inst. Mining Eng.*, vol. vii., pp. 85-104. Republished in Spon's Dictionary of Engineering, Article, 'Boring and Blasting,' pp. 501-512. 1869.
  - 28 WORDSWORTH, W.—[See 1843].
  - 29 WRIGHT, T.—A Monograph of the British Fossil Echinodermata from the Oolitic Formations, Vol. i., part 3. [Yorkshire, pp. 337, 343, 350, 371, 382, 385]. Pp. 303-390; Plates xxiii.-xxxvi. *Monogr. Pal. Soc.*, vol. xi. for the year 1857.
- 1860.
- 1 ANON.—Reports of the Inspectors of Mines. *Parliamentary Report*. Fol. London.
  - 2 — [Andrew Jukes].—A Guide to the Museum of the Literary and Philosophical Society. Hull. *Hull*. Pp. 103.
  - 3 ABEL, F.—On the Composition of Water obtained from the Coal-strata, Bradford Moor, Yorkshire. *Phil. Mag.*, ser. 4, vol. xix., pp. 330, 331.
  - 4 BAINES, S.—On some of the differences in the Deposition of Coal. *Proc. Yorks. Geol. Soc.*, vol. iv., pp. 77-88.
  - 5 BINGLEY, C. W.—On Fire Clay [Analysis]. *Ibid.*, pp. 75-77.
  - 6 BINNEY, E. W.—Observations on the Fossil Shells of the Lower Coal Measures. [Lancashire and Yorkshire]. *Trans. Manchester Geol. Soc.*, vol. ii., pt. 7, p. 72.

- 7 BOYNE, W.—The Yorkshire Library. A Bibliographical account of Books on Topography, Tracts of the Seventeenth Century, Biography, Spawes, Geology, Botany, maps, views, portraits, and miscellaneous literature relating to the county. 4to. Pp. 304.
- 8 CURLEY, TIMOTHY.—Map of Skipton.
- 9 DENNY, H.—On the Geological and Archæological Contents of the Victoria and Dowkabottom Caves in Craven. *Proc. Yorks. Geol. Soc.*, vol. iv., pp. 45-74.
- 10 DURAND-FARDEL, M.—Dictionnaire Général des Eaux Minérales et d'Hydrologie Médicales. . . . [Harrogate, vol. ii., pp. 85-87, and analyses]. 2 vols. 8vo. *Paris*.
- 11 EMMETT, —.—Notes on the Red and White Chalk of Yorkshire. [Foraminifera]. *Geologist*, vol. iii., pp. 419, 420.
- 12 GAGES, A.—Report on the Results obtained by the Mechanico-Chemical Examination of Rocks and Minerals. [Permian Limestones]. *Rep. Brit. Assoc. for 1859*, pp. 65-76.
- 13 HENDERSON, JOHN.—Report upon the Rye and Derwent Drainage in a letter to Mr. Pusey. Published in the *Journal of the Royal Agricultural Society of England*, vol. xiv., pt. 1, 1853, and reprinted by Henry Smithson, Messenger Office, *Malton*. December. Pp. 26. [See 1853].
- 14 HILEY, J. S.—[See 1841].
- 15 HULL, E.—The Coal Fields of Great Britain: their History, Structure, and Duration. With Notices of the Coal Fields of other parts of the World. 8vo. *London*. Ed. 2, 1861. Ed. 3, 1873. Ed. 4, 1881.
- 16 HUNT, R.—Statistical returns of the mineral produce of Yorkshire for the year 1857. *Proc. Yorks. Geol. Soc.*, vol. iii., pp. 696-703.
- 17 JUKES, ANDREW.—[See Anon.].
- 18 KELK, J.—The Scarborough Spa. [See 1841].
- 19 MORTIMER, R.—[Letter on] the Red Chalk of Yorkshire [North Grimston]. *Geologist*, vol. iii., pp. 119-120.
- 20 MUSPRATT, J. S.—Analysis of the Water of Ben Rhydding, Yorkshire. *Chem. News*, vol. ii., pp. 242, 243.

- 21 NORMAN, GEORGE.—List of Diatomaceæ occurring in the neighbourhood of Hull. [Includes records from the peat, etc., with few additions to the 1859 list]. *Journ. Micro. Soc.*, pp. 1-12, and pp. 1-12.
- 22 OWEN, R.—Palæontology, or a Systematic Summary of Extinct Animals and their Geological relations. 8vo. *Edinburgh*. Ed. 2, 1861.
- 23 ——— A Monograph of the Fossil Reptilia. [See 1861].
- 24 PHILLIPS, J.—Anniversary Address to the Geological Society of London. [Oolite and Red Chalk of Yorkshire]. *Quart. Journ. Geol. Soc.*, vol. xvi., pp. xxvii.-lv.
- 25 REID, P. S.—Considerations upon the Relative Ages of Coal Formations, and Comparative Discussions on their co-formation in Britain and elsewhere, with other Facts. [Yorkshire seams compared with Newcastle]. *Trans. N. Eng. Inst. Mining Eng.*, vol. viii., pp. 184-198. Discussion, vol. xi., pp. 139-142. (1862).
- 26 ROBINSON, F. K.—Whitby: its Abbey, and the principal parts of the neighbourhood; or, a sketch of the place in its former history and present state, with the topography and antiquities of the surrounding country. [Account of the jet trade]. 12mo. *Whitby*.
- 27 SMITH, A.—[See 1842].
- 28 SORBY, H. C.—On the Temperature of the Springs in the neighbourhood of Sheffield. *Proc. Yorks. Geol. Soc.*, vol. iv., pp. 40-45.
- 29 [THEAKSTON, S. W.].—Theakston's Guide to Scarborough. Eighth ed., pp. vi.+228
- 30 TINDALL, E.—Deposition of Warp. *Geologist*, vol. iii., pp. 39-40.
- 31 ——— Mammalian Remains at Bridlington [Elephant's tusk]. *Ibid.*, p. 119.
- 32 TOMLINSON, C.—On the Action of Heat on certain Sandstones of Yorkshire. [From Almondbury, near Huddersfield]. *Proc. Geol. Assoc.*, vol. i., pp. 50-55.
- 33 WRIGHT, T.—On the Subdivisions of the Inferior Oolite in the South of England, compared with the Equivalent Beds of that Formation on the Yorkshire Coast. *Quart. Journ. Geol. Soc.*, vol. xvi., pp. 1-48.

- 34 WRIGHT, T.—On the Zone of *Avicula contorta*, and the Lower Lias of the South of England. [Robin Hood's Bay]. *Quart. Journ. Geol. Soc.*, vol. xvi., pp. 374-411.

1861.

- 1 ANON.—Traces of our Remote Ancestors [reference to the pits on Danby Moor, etc.]. *Gentleman's Magazine*, part 1, pp. 498-507.
- 2 ——— [A short sketch of the Yorkshire Coast]. *Geologist*, vol. iv., p. 311.
- 3 ——— Reports of the Inspectors of Mines. *Parliamentary Report*. Fol. London.
- 4 ——— Harrogate Improvement Commissioners: Supply and Conservation of the Sulphur Waters of Harrogate. Special meetings, December 30th, 1861. Printed for private circulation. Pp. 38. 4to. Harrogate.
- 5 AVELINE, W. T.—The Geology of Parts of Nottinghamshire, Yorkshire, and Derbyshire (sheet 82, N.E.). List of Fossils by J. W. SALTER. *Geol. Survey Mem.* 8vo. London. Ed. 2, 1880.
- 6 BEWICK, J.—Geological Treatise on the District of Cleveland, in North Yorkshire, its Ferruginous Deposits, Lias and Oolites; with some observations on Ironstone Mining. [Geological map (scale about  $1\frac{1}{3}$  miles to an inch) and sections]. Pp. xvii.+194. 8vo. London and Newcastle.
- 7 BLOXHAM, C. L.—[See C. Tomlinson].
- 8 BURROW, J. H.—Remarks on the Bone-Caverns of Craven. *Geologist*, vol. iv., p. 539.
- 9 CURRY, J.—Observations on the Geology and Superficial Accumulations of the North End of the Pennine Chain and adjacent Depression. *Proc. Geol. Assoc.*, vol. i., pp. 122-144.
- 10 DAVIDSON, T.—A Monograph of the British Carboniferous Brachiopoda. Part 5, No. 3. [Yorkshire, pp. 82, 83, 86, 88, 92, 97, 105, 107, 109, 115, 116]. Pp. 81-120; Plates xvii-xxvi. *Monogr. Pal. Soc.*, vol. xii. for the year 1858.
- 11 ——— A Monograph of the British Carboniferous Brachiopoda. Part 5, No. 4. [Many Yorkshire species]. Pp.



- 121-210; Plates xxvii.-xlvii. *Monogr. Pal. Soc.*, vol. xiii., for the year 1859.
- 12 GEINITZ, H. B.—Dyas oder die Zechsteinformation und das Rothliegende. 2 vols. 4to. *Leipsig*, 1861-62. See E. W. Binney, 1864.
- 13 GRAINGE, W.—A Guide to Harrogate and Visitor's Handbook of the town and neighbourhood. [Geological notes, pp. 1-4]. Pp. iv., 86, 16mo. *Harrogate*. Another Ed. Pp. 80. 8vo. *Pateley Bridge*, 1875.
- 14 HORTON, W. S.—On the Oolite beds of Yorkshire as compared with their equivalent deposits in Wilts. and Gloucestershire. *Geologist*, vol. iv., pp. 35, 36. Abstract under different title, *Proc. Liverpool Geol. Soc.*, Sessions 1 and 2, pp. 8, 9.
- 15 HULL, E.—The Coal Fields of Great Britain. Ed. 2. [See 1860].
- 16 KIRBY, J. W.—On the Permian Rocks of South Yorkshire, and on their Palæontological Relations. [South Yorkshire compared with Durham]. *Quart. Journ. Geol. Soc.*, vol. xvii., pp. 287-325. *Geologist*, vol. iv., p. 207.
- 17 MATTHEWSON, J.—A Lecture on 'The Water we Drink,' delivered at. . . Hull, December 6th, 1860. *Hull*. 16 pp., with coloured 'Geological Map of the East Part of Yorkshire.'
- 18 MURRAY, J.—On the North Sea; with Remarks on some of its Firths and Estuaries. [Coast erosion. Map of the North Sea]. *Proc. Inst. Civ. Eng.*, vol. xx., pp. 314-334; Discussion, pp. 335-374.
- 19 OWEN, R.—A Monograph of the Fossil Reptilia of the Liassic Formations. [Yorkshire, Part iii., pp. 12-20, 115-117, 121-122]. Pp. 174, plates 50. *Monogr. Pal. Soc.* for the years 1859, 1860, 1863, 1869, 1881.
- 20 ——— Palæontology. [See 1860].
- 21 PRATT, C.—Notes on the Geology of Cleveland. *Geologist*, vol. iv., pp. 81-95, 160.
- 22 PRESTWICH, J.—On the Occurrence of *Cyrena fluminalis*, together with Marine Shells of Recent Species, in Beds of Sand and Gravel over Beds of Boulder Clay near Hull; with an Account of some Borings and Well-sections in

- the same District. *Quart. Journ. Geol. Soc.*, vol. xvii., pp. 446-456.
- 23 SALMON, H. C.—[Letter on] New Caverns in Yorkshire. [Greenhow Hill and Kilnsea Crag]. *Geologist*, vol. iv., p. 312.
- 24 SALTER, J. W.—[See W. T. Aveline].
- 25 TINDALL, E.—[A short sketch of the Yorkshire Coast. Miscalled 'Geology of Huddersfield']. *Geologist*, vol. iv., pp. 367-368.
- 26 ——— Letter [on the Red and White Chalk of Yorkshire]. *Ibid.*, p. 39.
- 27 TOMLINSON, C.—On the Efflorescence which succeeds the action of Heat on certain Sandstones of Yorkshire. [Sandstone from Almondbury]. Note by C. L. BLOXAM. *Proc. Geol. Assoc.*, vol. i., pp. 158, 159.
- 28 WALCOTT, M. E. C.—The East Coast of England from the Thames to the Tweed. Descriptive of Natural Scenery. Historical, Archæological and Legendary. [Yorkshire Geology, pp. 158-256]. 8vo. *London*.
- 29 WALCOTT, MACKENZIE, E. C.—A Guide to the coasts of Lincolnshire and Yorkshire. Description of Natural Scenery, Historical, Legendary and Archæological. *London*. Pp. x, + 121-262 [apparently a portion of the work referred to in no. 28. With title, preface, etc., added].
- 30 WATSON, J.—On the Geology of the Esk Valley [near Whitby]. *Proc. Yorks. Geol. Soc.*, vol. iv., pp. 91-96.
- 31 WHITE, W.—[See 1858].
- 32 WRIGHT, T.—A Monograph of the British Fossil Echinodermata from the Oolitic Formations. Part iv. The Echinolampidæ. The Stratigraphical Distribution of the Oolitic Species. The Bibliography of the Echinodermata and Additional Notes on the Echinoidea. [Yorkshire, pp. 395, 397, 405, 408, 463]. Pp. 391-468; Plates xxxvii.-xliii. *Monogr. Pal. Soc.*, vol. xii. for the year 1858.
- 1862.
- 1 ANON.—Black's Picturesque Guide to Yorkshire. 2nd ed. *Edinburgh*. 403 pp.

- 2 ANON.—Reports of the Inspectors of Mines. *Parliamentary Report*. Fol. London.
- 3 ALTHAUS, J.—The Spas of Europe. [Harrogate analyses, pp. 473, 474]. 8vo. London.
- 4 BARROW, T. W.—Remarks on the Bone-caves of Craven. *Rep. Brit. Assoc. for 1861*, Sections, p. 108.
- 5 BINNEY, E. W.—An Account of an Excursion to Todmorden. *Trans. Manchester Geol. Soc.*, vol. iii., pp. 325-328.
- 6 BLACK, A. and C.—[See Anon.].
- 7 BRADLEY, L.—An Inquiry into the Deposition of Lead Ore in the Mineral Veins of Swaledale, Yorkshire. [Geological Map of Swaledale, about 2 miles to an inch]. Pp. 40. 8vo. London.
- 8 DENNY, H.—On the Former Existence of the Roebuck in the West Riding of Yorkshire. *Proc. Yorks. Geol. Soc.*, vol. iv., pp. 146-150.
- 9 DURANT-FARDEL, M.—[See 1857].
- 10 GRAINGE, W.—Memoir of the life of Sir William Slingsby, discoverer of the first spaw at Harrogate. Pp. 21. 12mo. Harrogate.
- 11 GRUNER, E. L., and C. LAU.—Etat Présent de la Metallurgie du Fer en Angleterre. Part 4. *Ann. des Mines*, ser. 6, t. i, pp. 89-219. [Parts 1, 2, 3 not Yorkshire]. *Ibid.* ser. 5, t. xix., pp. 131; t. xx., pp. 109; t. xx., pp. 515.
- 12 HULL, E.—On Iso-diametric Lines, as means of representing the Distribution of Sedimentary Clay and Sandy Strata, as distinguished from Calcareous Strata, with special reference to the Carboniferous Rocks of Britain. *Quart. Journ. Geol. Soc.*, vol. xviii., pp. 127-146.
- 13 JEFFCOCK, PARKIN.—On the Coal and Iron Mining of South Yorkshire. [Geological Map and Sections]. *Proc. Inst. Mech. Eng.*, pp. 68-87.
- 14 JUKES, J. B.—Manual of Geology.—[See 1857].
- 15 KIRKBY, J. W.—On some Remains of Chiton from the Mountain Limestone of Yorkshire. [Settle]. *Quart. Journ. Geol. Soc.*, vol. xviii., pp. 233-237.
- 16 LAU, C.—[See E. L. Gruner.]
- 17 LYCETT, J.—Notes on the Ammonites of the Sands intermediate the Upper Lias and Inferior Oolite. *Proc. Cotteswold Nat. Club*, vol. iii., pp. 3-10.

- 18 MORRIS, J., and G. E. ROBERTS.—On the Carboniferous Limestone of Oretton and Farlow, Clee Hills, Shropshire [List of Fossils from Yorkshire]. *Quart. Journ. Geol. Soc.*, pp. 94-102.
- 19 MUSPRATT, J. S.—Scarborough Spa : Analysis of the Water of these Mineral Springs. *Chem. News*, vol. vi., p. 278.
- 20 OLDHAM, J.—On Reclaiming Land from Seas and Estuaries. [Waste of Land along the Humber, etc.]. *Proc. Inst. Civ. Eng.*, vol. xxi., p. 454-465 ; Discussions, pp. 478-492.
- 21 PHILLIPS, JOHN.—A Map of the Principal Features of the Geology of Yorkshire, by JOHN PHILLIPS, M.A., LL.D., F.R.S. 2nd ed. Scale, 5 miles to 1 inch (with section of Strata). [1st ed., 1853].
- 22 REID, P. S.—On a Method of Tubing Bore-holes in passing through Clay, Quicksands, and other Arenaceous and Water-bearing Strata. [Section at Kirklevington]. *Trans. N. Inst. Mining Eng.*, vol. x., pp. 199-205.
- 23 ——— [See 1860].
- 24 ROBERTS, G. E.—[See J. Morris].
- 25 WALBRAN, J. R.—[See 1844].
- 26 WELLS, ROBERT.—In *re* Humber Foreshore and adjoining land (in Myton). In the Borough of Kingston-upon-Hull. Report of the Special Committee on the claims of the Crown and the Corporation of Hull. *Hull*. 8vo. 60 pp.
- 27 WILTSHIRE, T.—On the Ancient Flint Implements of Yorkshire, and the Modern Fabrication of similar Specimens. *Proc. Geol. Assoc.*, vol. i., pp. 215-226.
- 28 WOOD, N.—On the Upper and Lower Beds of Coal in the Counties of Northumberland and Durham. [Notes on Yorkshire, pp. 129, 131, 138]. *Trans. N. Inst. Mining Eng.*, vol. xi., pp. 101-138.

1863.

- 1 ANON.—Ancient Canoe [found at a depth of 5 feet at Giggleswick Tarn]. *Geologist*, vol. vi., 318, 319.
- 2 ——— Reports of the Inspectors of Mines. *Parliamentary Report*. Fol. London.
- 3 BAILEY, W. H.—[See A. Carte].

- 4 BAKER, J. G.—North Yorkshire ; studies of its Botany, Geology, Climate, and Physical Geography. [Geology revised by J. PHILLIPS, pp. 5-34]. Geological Map. 8vo. London. Ed. 2. 8vo. Leeds, 1882.
- 5 BELL, T. L.—The Manufacture of Iron in connection with the Northumberland and Durham Coal-Field. *Colliery Guard.*, vol. vi., pp. 265-267, 281-285, 306-327 ; *Rep. Brit. Assoc. for 1863*, pp. 730-764 ; *Trans. N. Inst. Mining Eng.*, vol. xiii., pp. 109-155, 1864.
- 6 BELL, T.—A Monograph of the Fossil *Malacostracous Crustacea* of Great Britain. Part 2, Crustacea of the Gault and Greensand [*Meyeria ornata* from Speeton, pp. 30-33]. *Monogr. Pal. Soc.*, vol. xiv., for 1860.
- 7 CARTE, A., and W. H. BAILY.—On a New Species of *Plesiosaurus* from the Lias near Whitby, Yorkshire. *Rep. Brit. Assoc. for 1862*, Sections, pp. 68, 69 ; *Journ. Roy. Dublin Soc.*, vol. iv., p. 160, pl. v.
- 8 COLLIER, CHARLES.—Flint Jack.—[See under 1867].
- 9 CURLEY, T.—On Gravels and other Superficial Deposits of Ludlow, Hereford, and Shipton in Yorkshire. *Quart. Journ. Geol. Soc.*, vol. xix., p. 175.
- 10 DAVIDSON, T.—A Monograph of British Fossil Brachiopoda. Vol. ii., Permian and Carboniferous Species. Part 5 [No. 5]. Pp. 212-280 ; plates xlviii.-lv. [Yorkshire, pp. 224, 226, 229, 232, 235-243, 244, 246]. *Monogr. Pal. Soc.*, vol. xiv., for the year 1860.
- 11 FRASER, J. G.—Description of the Lydgate [between Oldham and Greenfield] and of the Buckhorn Weston Railway Tunnels. [Geological Section]. *Proc. Inst. Civ. Eng.*, vol. xxii., pp. 371-384.
- 12 GRAINGE, W.—Nidderdale ; or, an Historical, Topographical, and Descriptive Sketch of the Valley of the Nidd. [Alludes to geology about Ripley]. 8vo. *Pateley Bridge*.
- 13 GRUNER, E. L., and C. LAU.—The Iron Manufacture of the North of England. [Cleveland, pp. 324-331, mostly commercial details]. *Mining Smelting Mag.*, vol. iii., No. 18, pp. 321-335 ; Abstracted from *Ann. des Mines*, ser. 6, vol. i., pp. 89-219. [See 1862].
- 14 HARKNESS, —.—On the Skiddaw Slate Series [refers to

- sections in West Riding]. *Quart. Journ. Geol. Soc.*, vol. xix., p. 113.
- 15 HENSLOW, G.—Phosphatic Nodules. *Leisure Hour*. Vol. xii., pp. 436-438. [See 1892].
- 16 HULL, E.—A brief sketch of the Triassic Group of central England; with special reference to its usefulness as a source of water supply. *Proc. Dudley Midl. Geol. Soc.*, vol. i., No. 2, pp. 49-55.
- 17 ——— The Geology of the Country around Oldham (sheet 88 S.W.). *Geological Survey Memoir*. 8vo. London.
- 18 JONES, T. R.—A Monograph of the Fossil *Estheriæ*. [*Cypris concentrica*, from Scarborough, pp. 101-103]. Pp. viii., 134; plates v., *Monogr. Pal. Soc.*, vol. xiv., for the year 1860.
- 19 KENNION, G.—[See under 1853].
- 20 LAU, C.—[See E. L. Gruner].
- 21 LEE, EDWIN.—[See 1841].
- 22 LUPTON, M.—Red Chalk. *Chem. News*, No. 162, p. 24.
- 23 LYCETT, J.—Supplementary Monograph on the Mollusca from the Stonesfield Slate, Great Oolite, Forest Marble, and Cornbrash. [Inferior Oolite and Cornbrash of Yorkshire]. *Monogr. Pal. Soc.*, vol. xv., for the year 1861.
- 24 LYELL, C.—The Geological Evidences of the Antiquity of Man, with remarks on theories of the Origin of Species by Variation. Pp. xii., 520. 8vo. London. Ed. 2, 1863. Ed. 3, 1863. Ed. 4, 1873.
- 25 MARLEY, J.—[See 1864].
- 26 MIALL, LOUIS C.—Physical Geography and Natural Productions of Bradford and the neighbourhood; A series of papers reprinted from the *Bradford Review*. 4to. Pp. 16.
- 27 MOORE, C.—On the Organic Contents of the Lead Veins of Allenheads and other Lead Veins of Yorkshire. [Graslington Mines]. *Geologist*, vol. vi., pp. 372-374.
- 28 OWEN, R.—A Monograph of the Fossil Reptilia. [See 1861].
- 29 PHILLIPS, J.—Notices of Rocks and Fossils in the University Museum, Oxford. [Yorkshire, pp. 37, 50, 53, 85, 86]. Pp. 93. 8vo. Oxford.
- 30 ——— [See J. G. Baker].

- 31 PLATT, W. W.—[Records of borings at Middlesborough, Bradford, and Wirral]. *Proc. Lit. Phil. Soc., Manchester*, vol. iii., pp. 153-155.
- 32 TINDALL, E.—Analysis of Red Chalk. [Speeton and Hunstanton]. *Geologist*, vol. vi., pp. 93-94.
- 33 WRIGHT, T.—A Monograph of British Fossil Echinodermata from the Oolitic Formations. Vol. ii., pt. 1, On the Asteroidea. [Yorkshire, pp. 101, 112-116, 122, 125-130]. *Pal. Soc. for the years 1861, 1864, 1880*. Pp. 1-130; plates i.-xii; *Monogr. Pal. Soc.*, vol. xv., for the year 1861.

1864.

- 1 ANON. [BINNEY, C. W.].—An Account of the Excursion to Halifax, Hipperholme, Lightcliffe, and Low Moor. *Trans. Manchester Geol. Soc.*, vol. iv., pp. 16-21.
- 2 ——— Reports of the Inspectors of Mines. *Parliamentary Report*. Fol. London.
- 3 BELL, I. L.—On the Manufacture of Iron in connection with the Northumberland and Durham Coalfield. [Analyses of ores, etc.; some from Yorkshire]. *Trans. N. Inst. Mining Eng.*, vol. xiii., p. 109; and *Rep. Brit. Assoc. for 1863*, p. 730. [See 1863].
- 4 BINNEY, C. W., and J. W. KIRKBY.—The Dyas or Permian Formation in England (Translated from 'Dyas,' etc., by Dr. Geinitz). [Yorkshire, p. 128]. *Trans. Manchester Geol. Soc.*, vol. iv., pp. 120-146. [See 1861].
- 5 ——— [See Anon.].
- 6 BUDDLE, JOHN.—[See W. Grainge].
- 7 CLAPHAM, R. C.—[See T. Richardson].
- 8 DANIEL, —.—[See W. Grainge].
- 9 DENNY, H.—Notice of an apparently undescribed Fossil Plant, from the Carboniferous Sandstone near Leeds. *Proc. Yorks. Geol. Soc.*, vol. iv., pp. 304-308.
- 10 FIRTH, W.—On Coal Cutting by Machinery. [Section of coal seam at West Ardesley Colliery, near Leeds]. *Trans. S. Wales Inst. Eng.*, vol. iii., pp. 196-202.
- 11 GEINITZ, —.—[See C. W. Binney].
- 12 GRAINGE, W.—The Geology of Harrogate; to which are appended statements and opinions never before published of Dr. William Smith; Professors Phillips, Daniel, and

- Turner; William West of Leeds; Thomas Sopwith, C.E.; Professor Johnstone of Durham, John Buddle, C.E.; and others; on the origin of the Medicinal Waters of Harrogate. 12mo. *Harrogate*.
- 13 HARKNESS, R.—[See R. I. Murchison].
- 14 HARRISON, S.—A Complete History of the Great Flood at Sheffield, on March 11th and 12th, 1864, being a True and Original Narrative. . . . Mr. Rawlinson's Report on the Origin of the Flood. 8vo.
- 15 HORTON, W. S.—On the Ironstone Bed of the Middle Lias. *Proc. Liverpool Geol. Soc.*, Session 5, pp. 8-12.
- 16 HULL, EDWARD.—The Coal Resources of Great Britain. *Quart. Journ. Science*. Vol. i., No. 1, Jan., pp. 24-35.
- 17 JOHNSTONE, —.—[See W. Grainge].
- 18 KIRKBY, J. W.—[See C. W. Binney].
- 19 LECKENBY, J.—On the Sandstones and Shales of the Oolites of Scarborough, with descriptions of some New Species of Fossil Plants. *Quart. Journ. Geol. Soc.*, vol. xx., pp. 74-82.
- 20 ——— [See T. Wright].
- 21 MANSON, R. T.—Popular Geology of Darlington. 8vo. *Darlington*.
- 22 MARLEY, J.—On the Discovery of Rock-salt in the New Red Sandstone at Middlesbrough. *Trans. N. Inst. Mining Eng.*, vol. xiii., pp. 17-22, 92. *Geologist*, vol. vi., pp. 387-389 (1863). *Rep. Brit. Assoc.* for 1863, pp. 82, 83.
- 23 MARNER, W.—On the Machinery used in Boring Artesian Wells, and its application to Mining Purposes. [Borings at Middlesbrough, p. 65, Bradford and Halifax, p. 67]. *Trans. S. Wales Inst. Eng.*, vol. iv., pp. 51-71; Discussion, pp. 71-78.
- 24 MURCHISON, R. I., and R. HARKNESS.—On the Permian Rocks of the North West of England and their Extension into Scotland. *Quart. Journ. Geol. Soc.*, xxvii., p. 240.
- 25 MUSPRATT, S.—Analysis of the Harlow Car Waters, near Harrogate. *Chem. News*, vol. ix., pp. 180, 181.
- 26 PATTISON, J.—On Zinc, Nickel, and Cobalt in the Cleveland Ironstone. *Rep. Brit. Assoc.* for 1863, Sections, p. 49.



- 27 PERCY, J.—Metallurgy: Iron and Steel. [Analyses of British Iron Ores. Yorkshire, pp. 211, 221-236]. 8vo. London.
- 28 PHILLIPS, J.—[See W. Grainge].
- 29 PROCTER, W.—On the Red Chalk. *Rep. York. Phil. Soc.*, for 1863, pp. 23-24.
- 30 RAMSAY, A. C.—The Breaks in Succession of the British Mesozoic Strata. Anniversary Address to the Geological Society. *Quart. Journ. Geol. Soc.*, vol. xx., pp. xl.-lx.
- 31 RAWLINSON, —.—[See S. Harrison].
- 32 RICHARDSON, T., J. C. STEVENSON, and R. C. CLAPHAM.—On the Chemical Manufactures of the Northern Districts. [Alum Industry, p. 709; Mulgrave Cement, p. 713]. *Rep. Brit. Assoc.* for 1863, pp. 701-714.
- 33 ROTUREAU, A.—Des principales eaux minérales de L'Europe. [Harrogate, pp. 92-105]. 3 vols., not numbered. 8vo. Paris. Earlier editions, *Germany* and *Hungary*, 1858; *France*, 1859.
- 34 SHEAHAN, J. J.—General and Concise History and Description of the Town and Port of Kingston-upon-Hull. Post 8vo. Pp. 744. [Ed. 2, 1866-7, pp. 96].
- 35 SOPWITH, THOMAS.—[See W. Grainge].
- 36 SMITH, WILLIAM.—[See W. Grainge].
- 37 STEVENSON, J. C.—[See T. Richardson].
- 38 TINDALL, E.—The Present State of the Bridlington Crag. *Geol. Mag.*, vol. i., p. 142.
- 39 TURNER, —.—[See W. Grainge].
- 40 WEST, WILLIAM.—[See W. Grainge].
- 41 WOOD, S. V., Jun.—The Bridlington Crag. *Geol. Mag.*, vol. i., pp. 246, 247.
- 42 WOODWARD, S. P.—Remarks on the Bridlington Crag, with a List of its Fossil Shells. *Ibid.*, pp. 49-55, 142.
- 43 WRIGHT, T.—A Monograph of the British Fossil Echinodermata from the Cretaceous Formations. Vol. i., pt. 1. [Note by J. LECKENBY on the Speeton Clay, 9; Yorkshire, pp. 13, 14]. Pp. 1-64; plates i.-xi. *Monogr. Pal. Soc.*, vol. xvi., for the year 1862. [See 1863].
- 44 ——— On the Ammonites of the Lias Formation. *Proc. Cotteswold Nat. Club*, vol. iii., pp. 162-179, 235-245 (1864-5).

- 45 WRIGHT, T.—On the Early History of Leeds in Yorkshire. . . .  
A lecture read before the Phil. and Lit. Soc. of Leeds,  
April 19th, 1864. [Reference to the Hippopotamus  
from Wortley, etc.]. *Leeds*. Pp. 1-30.

1865.

- 1 ANON.—[T. RUPERT JONES, Letter on]—A new Coalfield  
in Yorkshire. [Nevison's Farm, near Thirsk]. *Geol.*  
*Mag.*, vol. ii., p. 140.
- 2 ——— Reports of the Inspectors of Mines. *Parliamentary*  
*Report*. Fol. *London*.
- 3 AVEBURY, —.—[See J. Lubbock].
- 4 BINNEY, E. W.—A Description of some Fossil Plants,  
showing Structure, found in the Lower Coal-seams of  
Lancashire and Yorkshire. [North Ofram]. *Phil.*  
*Trans.*, vol. clv., pp. 579-604; *Proc. Roy. Soc.*, vol. xiv.,  
pp. 327-329; *Ann. Mag. Nat. Hist.*, ser. 3, vol. xvi.,  
pp. 128-130.
- 5 DAWKINS, W. BOYD.—On the Mammalian Remains found  
by E. Wood, near Richmond, Yorkshire. With an  
Introductory Note on the Deposit in which they were  
found, by E. WOOD and G. E. ROBERTS. *Quart. Journ.*  
*Geol. Soc.*, vol. xxi., pp. 493-495.
- 6 EMBLETON, T. W.—On a Patent . . . Coal-cutting  
Machine in use at Kippax Colliery, near Leeds. [Section  
of Coal-seam]. *Trans. N. Inst. Mining Eng.*, vol.  
xiv., pp. 83-89.
- 7 GRAINGE, W.—The Tourist's Guide to Brimham Rocks  
in the township of Hartwith, and West-Riding of York-  
shire. [Extracted from Nidderdale]. Ed. 2. Pp. 16.  
12mo. *Pateley Bridge*.
- 8 JONES, T. RUPERT.—[See Anon.].
- 9 LECKENBY, J.—On the Boulder-clay and Drift of Scar-  
borough and East Yorkshire. *Rep. Brit. Assoc.* for  
1864, p. 58; *Geol. Mag.* vol. ii., pp. 347, 348.
- 10 LOWRY, J. W.—[See J. W. Salter].
- 11 LUBBOCK, J. (BARON AVEBURY).—Prehistoric Times, as  
illustrated by Ancient Remains and the Manners and  
Customs of Modern Savages. Pp. xxiv., 512. 8vo.

*London*. Ed. 2, 1866. Ed. 3, 1872. Ed. 4, 1878.  
Ed. 5, 1890. Ed. 6, 1900.

- 12 LYELL, C.—[See 1838].
- 13 MACKINTOSH, D.—Marine Denudation illustrated by the  
Brimham Rocks. *Geol. Mag.*, vol. ii., pp. 154-158.
- 14 MUSPRATT, J. S.—Analysis of the Montpellier Saline Chaly-  
beate Water. *Chem. News*, vol. xii., p. 37.
- 15 ——— The Cheltenham Saline Chalybeate Water, Harrogate.  
*Ibid.*, pp. 83, 215.
- 16 NORMAN, GEORGE.—List of Diatomaceæ occurring in the  
neighbourhood of Hull [including additions to previous  
lists, and records from the lacustrine deposits, etc.].  
Pp. 6+32.
- 17 OWEN, R.—Monograph of the Fossil Reptilia of the Liassic  
Formations. Pt. 1, Sauropterygia. [*Plesiosaurus homalo-*  
*spondylus* from Whitby; plates v., vi., vii., viii.].  
Pp. 1-40; plates i.-xvi., *Monogr. Pal. Soc.*, vol. xvii.,  
for the year 1863.
- 18 PHILLIPS, J.—Note on the Geology of Harrogate. *Quart.*  
*Journ. Geol. Soc.*, vol. xxi., pp. 232-235. Abs. in *Geol.*  
*and Nat. Hist. Rep.*, pp. 44-45.
- 19 ——— On the Formation of Valleys near Kirkby Lonsdale.  
*Rep. Brit. Assoc. for 1864*, Sections, pp. 63, 64.
- 20 ——— On the Distribution of Granite Blocks from Wasdale  
Crag. *Ibid.*, pp. 65, 66.
- 21 ——— Monograph of the British Belemnitidæ. Pt. 1, Intro-  
duction. *Monogr. Pal. Soc.*, vol. xvii., for the year 1863.
- 22 PIGGOTT, G. W.—On the Harrogate Spas. Ed. 4. [See  
under 1853].
- 23 REYNOLDS, J.—Geological Atlas of Great Britain. 33  
maps, 32 pp.
- 24 ROBERTS, G. C.—Geological Notes on the Mountain Lime-  
stone of Yorkshire. [*Woodocrinus expansus*, pl. v.].  
*Geol. Mag.*, vol. ii., 163, 164.
- 25 ——— [See W. Boyd Dawkins].
- 26 ROFE, J.—Notes on some Echinodermata from the Mountain  
Limestone, etc. [Borders of Lancashire and Yorkshire].  
*Geol. Mag.*, vol. ii., pp. 245-252.

- 27 SALTER, J. W., and H. WOODWARD.—A Descriptive Catalogue of all the genera and species contained in the accompanying Chart [by J. W. LOWRY] of Fossil Crustacea . . . [Speeton]. 4to. *London*.
- 28 SCOTT, W. L.—On some probable New Sources of Thallium. [From ferruginous sand, near Whitby]. *Rep. Brit. Assoc. for 1864*, Sections, p. 41.
- 29 SEELEY, H. G.—On *Plesiosaurus macropterus*, a new species from the Lias of Whitby. *Ann. Mag. Nat. Hist.*, ser. 3, vol. xv., pp. 49-53, 232.
- 30 SIMPSON, M.—The Drift of the East of England. *Geol. Nat. Hist. Rep.*, vol. i., p. 57.
- 31 ——— The Plant Strata of Gristhorpe-Bay, near Scarborough. *Ibid.*, pp. 71-2.
- 32 SMITH, H. E.—The Limestone Caves of Craven and their Ancient Inhabitants. *Trans. Hist. Soc. Lanc. Chesh.*, n. ser., vol. v., pp. 199-230.
- 33 TATE, R.—On the so-called Rostellariæ of the Cretaceous Rocks, with a Descriptive Catalogue of the British Species. [*Aporrhais robinaldina*, from Speeton, pp. 100, 101]. *Geol. Nat. Hist. Rep.*, No. 7 (Nov. 1, 1865), pp. 93-102.
- 34 WOOD, E.—[See W. Boyd Dawkins].
- 35 WOODWARD, H.—[See J. W. Salter].

## 1866.

- 1 ANON.—Account of an Excursion to Saltburn. [Ironstone]. *Geol. Mag.*, vol. iii., p. 517.
- 2 ——— Reports of the Inspectors of Mines. *Parliamentary Report*. Fol. *London*.
- 3 ——— Report of the Engineers . . . on the Dale Dyke and Agden Reservoirs. [Geology, pp. 9, 11, etc.]. *Parliamentary Paper*. Pp. 40. Fol. *London*.
- 4 AUSTIN, R. GODWIN.—[See G. B. Greenough].
- 5 BINNEY, E. W.—A few Remarks on the so-called Lower New Red Sandstones of Central Yorkshire. [That they are of Millstone Grit age]. *Geol. Mag.*, vol. iii., pp. 49-55.
- 6 ——— The so-called Lower New Red Sandstone of Plumpton, Yorkshire. [Letter pointing out its Millstone Grit age]. *Ibid.*, pp. 473, 474.

- 7 BINNEY, E. W.—On Fossil Wood found in calcareous nodules in the lower coal-seams of Lancashire and Yorkshire. *Proc. Lit. Phil. Soc., Manchester*, vol. v., pp. 61-64.
- 8 BRADY, H. B.—[See T. R. Jones].
- 9 BROCKBANK, W.—[See E. Hull].
- 10 C[HURCH], A. H.—Ferrous chloride in a Mineral Water. [Cheltenham Saline Chalybeate Well at Harrogate]. *Geol. Mag.*, vol. iii., p. 285.
- 11 DAVIS, R. H.—Note on the Existence of Lithium, Barium, and Strontium in the Medicinal Springs of Harrogate. *Chem. News*, vol. xiii., pp. 302, 303.
- 12 — The Imperial Saline Ferruginous Well at Harrogate (formerly called the Cheltenham Saline Chalybeate Well) ; its History and Analyses. *Pharm. Journ.*, ser. 2, vol. vii., pp. 458-463.
- 13 DAWKINS, W. BOYD, and W. AYSHFORD SANDFORD.—A Monograph of the British Pleistocene Mammalia. Pt. 1, Introduction (pp. i.-l.). British Pleistocene Felidæ. *Felis spelæa* (pp. 1-28 ; plates i.-v.). Yorkshire, pp. xii., xiii., xxiv.]. *Monogr. Pal. Soc.*, vol. xviii., for the year 1864.
- 14 DENNY, H.—[See J. Farrer].
- 15 DUNCAN, P. M.—A Monograph of the British Fossil Corals, Second Series. Being a Supplement to the Monograph of Messrs. Milne Edwards, and Jules Haime. [Yorkshire, Pt. 3, 1872, pp. 12, 13, 21, 22]. *Pal. Soc.* for the years 1865, 1866, 1867, 1868, 1869, 1872.
- 16 EDWARDS, MILNE.—[See P. M. Duncan].
- 17 FARRER, J.—Further Exploration in the Dowkerbottom Caves, in Craven. With Remarks by H. DENNY. *Proc. Yorks. Geol. Soc.*, vol. iv., pp. 414-422.
- 18 FOSTER, —.—[See 1867].
- 19 GREENOUGH, G. B.—A Geological Map of England and Wales (on the basis of the original Map of Wm. Smith, 1815), revised and improved under the superintendence or a Committee of the Geological Society of London, from the Maps of the Geological Survey of Great Britain 1836-1863, and Maps and Documents contributed by Sir R. I. Murchison, Professor Phillips, Joseph Prestwich,

- R. Godwin Austen, and others. Scale  $5\frac{5}{7}$  miles to an inch.
- 20 HAINE, JULES.—[See P. M. Duncan].
- 21 HARDWICK, C.—Geology, in its Relation to Archæology. [Settle caves, p. 208]. *Trans. Manchester Geol. Soc.*, vol. v., pp. 201-211.
- 22 HULL, E.—The New Iron-fields of England. *Quart. Journ. Sci.*, vol. iii., pp. 323-332.
- 23 — and W. BROCKBANK.—On the Liassic and Oolitic Iron Ores of Yorkshire and the East Midland Counties. (Abstract). *Proc. Lit. Phil. Soc., Manchester*, vol. v., pp. 119-122.
- 24 JAMES, J.—Continuations and Additions to the History of Bradford, and its Parish. [Geological Notes, pp. 10-13]. Pp. 322, xxix., 5. 8vo. *London and Bradford*. [See also 1841].
- 25 JONES, T. R.—Notes on Palæozoic Bivalved Entomostraca. No. 7, Some Carboniferous Species. [Bolland and Settle, pp. 37-39]. *Ann. Mag. Nat. Hist.*, ser. 3, vol. xviii., pp. 32-51.
- 26 — W. K. PARKER, and H. B. BRADY.—A Monograph of the Foraminifera of the Crag. Pt. 1, No. 1. [Bridlington, p. 62; plate iv.]. Pp. i-vi., 1-72; Appendix, i. and ii.; plates i-iv. *Monogr. Pal. Soc.*, vol. xix., for the year 1865.
- 27 LUBBOCK, J.—Prehistoric Times. Ed. 2. [See 1865].
- 28 MACKINTOSH, D.—The Relative Extent of Atmospheric and Oceanic Denudation, with a particular reference to certain Rocks and Valleys in Yorkshire and Derbyshire. [Marine denudation of Brimham Rocks]. *Rep. Brit. Assoc.* for 1865. Sections, pp. 65, 66.
- 29 MIAL, LOUIS C.—Summary Notes on the Organisation and Classification of Brachiopoda. . . . Printed for the use of the geological section of the Bradford Philosophical Society. 2 plates. 8vo. Pp. 13.
- 30 MURCHISON, R. I.—[See G. B. Greenough].
- 31 MUSPRATT, J. S.—Discovery of a new Chalybeate at Harrogate. *Chem. News*, vol. xiii., pp. 26, 27.
- 32 — ‘Dr. Muspratt’s Chalybeates,’ in Harrogate. *Ibid.*, pp. 203, 204, 224, 238, 299.

- 33 MUSPRATT, J. S.—New Analysis of the Montpellier Saline Chalybeate (Kissingen) Water at Harrogate. *Chem. News* vol. xiv., p. 49.
- 34 OLDHAM, J.—Evidence before the Select Committee of the Lords on the Holderness Embankment and Reclamation Bill, April 1866.
- 35 PARKER, W. K.—[See T. R. Jones].
- 36 PHILLIPS, J.—A Monograph of the British Belemnitidæ. Pt. 2, Liassic Belemnites. [Yorkshire, pp. 31, 32, 34, 36, 39, 40, 41, 43, 44, 46, 48]. Pp. 29-52; plates i.-vii. *Monogr. Pal. Soc.*, vol. xviii., for the year 1864.
- 37 — [See G. B. Greenough].
- 38 — [See J. Thorpe].
- 39 PRESTWICH, JOSEPH.—[See G. B. Greenough].
- 40 SANDFORD, W. AYSHFORD.—[See W. Boyd Dawkins].
- 41 SEDGWICK [A.].—A Sketch of the Geology of the Valley of Dent, with some account of a destructive Avalanche which fell in the year 1752. *Proc. Cambridge Phil. Soc.*, No. 16, pp. 236-238.; *Phil. Mag.*, ser. 4, vol. xxx., pp. 79-81.
- 42 SHEAHAN, JAMES JOSEPH.—History of the Town and Port of Kingston upon Hull. 2nd edit. *Beverley*. Pp. iv.+796. [See 1864].
- 43 SIMPSON, M.—Inferior Oolite, Lias, Belemnites, etc., of the Yorkshire Coast. [Descriptions and horizons of Belemnites]. *Geol. Nat. Hist. Rep.*, vol. i., pp. 215, 216.
- 44 SMITH, WILLIAM.—[See G. B. Greenough].
- 45 SUSS, E.—[Letter] On the Existence of Hyalonema in a Fossil State. [Yorkshire Mountain Limestone]. *Ann. Mag. Nat. Hist.*, ser. 3, vol. xviii., p. 104.
- 46 TATE, R.—On the so-called Rostellariæ of the Cretaceous Rocks, with a descriptive catalogue of the British Species. [Speeton, p. 101]. *Geol. and Nat. Hist. Repertory*, vol. i., p. 93.
- 47 TOPLEY, W.—Notes on the Physical Geography of East Yorkshire. [Principally N. E. Yorkshire]. *Geol. Mag.*, vol. iii., pp. 435-439.
- 48 THORPE, J.—Ripley, its History and Antiquities. [Quotation from Prof. PHILLIPS, p. 111.]. Pp. 164. 8vo. *Harrogate*.

- 49 TUTE, J. S.—The Lower New Red Sandstone of Central Yorkshire. *Geol. Mag.*, vol. iii., pp. 185-189.
- 50 WHITAKER, J.—On the Outcrop of the Lower Coal-Measure Rocks on Boulsworth and Gorples ; together with Observations on the Origin of some 'Rock Basins' thereon. *Trans. Manchester Geol. Soc.*, vol. v., pp. 94-104.
- 51 WOODWARD, H.—On the Occurrence of *Ceratiocaris* in the Wenlock Formation (Upper Silurian) of England. [Coniston Grit, Dent]. *Geol. Mag.*, vol. iii., pp. 203-205.
- 52 WRIGHT, T.—A Monograph of the British Fossil Echinodermata from the Oolitic Formations. Vol. ii., pt. 2, On the Liassic Ophiuroidea. [Yorkshire, pp. 141, 142, 143, 149]. Pp. 131-154 ; plates xiii.-xviii. *Monogr. Pal. Soc.*, vol. xviii., for the year 1864.

1867.

- 1 ANON.—Whitby Museum [records gift of skeleton of *Ichthyosaurus acutirostris* from the Lias of Boulby]. *Whitby Repository*, January 1st, pp. 279-280.
- 2 ——— Flint Jack (Edward Simpson). *Whitby Repository* April 1st, pp. 395-398.
- 3 ——— Flint Jack [reprinted from the *Malton Messenger*]. *Whitby Repository*, May, pp. 431-435.
- 4 ——— Flint Jack. *Whitby Repository*, June, pp. 442-445.
- 5 ——— Reports of the Inspectors of Mines. *Parliamentary Reports*. Fol. London.
- 6 ALLEN, E.—Yorkshire Naturalists Club [describes Whitby fossils]. *Whitby Repository*, November, pp. 183-184.
- 7 BINNEY, E. W.—On the Upper Coal-Measures of England and Scotland. [Table of South Yorkshire Permian and Millstone Grit, pp. 55]. *Trans. Manchester Geol. Soc.*, vol. vi., pp. 38-63.
- 8 ——— On two Remarkable Fossil Insects from the Lower Coal Measures near Huddersfield. *Proc. Lit. Phil. Soc., Manchester*, vol. vi., p. 59.
- 9 BLACK, A. and C.—Black's Guide to Yorkshire. [Analyses and History of the Harrogate Wells, pp. 134-141]. Ed. 4. 12mo. *Edinburgh*.
- 10 BRODIE, P. D.—On the Correlation of the Lower Lias at



Barrow-on-Soar, in Leicestershire, with the same Strata in Warwickshire, Worcestershire, and Gloucestershire ; and on the Occurrence of the remains of Insects at Barrow and in Yorkshire. *Ann. Mag. Nat. Hist.*, ser. 3, vol. xix., pp. 31-34.

- 11 CARRUTHERS, W.—On Some Cycadian Fruits from the Secondary Rocks of Britain. [*Zamia gigas* from Runswick, p. 103]. *Geol. Mag.*, vol. iv., pp. 101-106. *Journ. Bot.*, No. 49, vol. v., pp. 1-21.
- 12 COLLIER, CHARLES.—Flint Jack [reprinted from the *Gentleman's Magazine* of 1863]. *Whitby Repository*, March, pp. 321-322, 2 plates.
- 13 COWTON, THOMAS.—A Knowledge of the Mineralogy of the Yorkshire Coast made easy to the young mineralogist. With Elementary Collections of Specimens found at Bridlington Quay and the Vicinity, and a descriptive catalogue to facilitate the study of this interesting branch of Science. *Bridlington Quay*. 12mo. 24 pp.
- 14 CURRY, J.—On the Drift of the North of England. *Quart. Journ. Geol. Soc.*, vol. xxiii., pp. 40-44.
- 15 DAWKINS, W. BOYD.—On the Pleistocene Mammals of Yorkshire. [Kirkdale, Bielbecks, Leeds]. (Abstract). *Proc. Yorks. Geol. Soc.*, vol. iv., pp. 502-510.
- 16 DUNCAN, P. M.—[See 1866].
- 17 ELLIS, H. W. T.—Ancient Nuts [from Keadby on the Trent]. *Science Gossip*, No. 28, p. 92.
- 18 FOSTER, —.—On the Discovery of Ancient Trees below the surface of the Land, at the Western Dock, now being constructed at Hull. *Rep. Brit. Assoc.* for 1866, Sections, p. 52. *Journ. Bot.*, vol. iv., p. 316 (1866).
- 19 HALL, H. F.—Drift Sections of the Holderness Coast. *Proc. Liverpool Geol. Soc.*, Session 8, p. 12.
- 20 ——— Lacustrine Deposits of Holderness. *Ibid.*, pp. 38-48.
- 21 HUGHES, T. MCK.—On the Break between the Upper and Lower Silurian Rocks of the Lake District, as seen between Kirkby Lonsdale and Malham, near Settle. *Geol. Mag.*, vol. iv., pp. 346-356.
- 22 KIRKBY, J. W., and J. YOUNG.—Notes on the Remains of Chiton and Chitonellus from the Carboniferous Strata of Yorkshire and the West of Scotland. *Ibid.*, pp. 340-343.

- 23 LYELL, C.—[See 1830].
- 24 MORRELL, W.—The History and Antiquities of Selby. [Geology, pp. 277-8, and map]. 8vo. *Selby and London*. 350 pp.
- 25 MURCHISON, R. I.—On the Parts of England and Wales in which Coal may and may not be looked for beyond the known Coalfields. [Yorkshire, p. 61]. *Rep. Brit. Assoc. for 1866.*, Sections, pp. 57-63.
- 26 ——— Siluria.—[See 1854].
- 27 MUSPRATT, J. S.—Recent Analysis of the Montpellier Saline Chalybeate (Kissingen) Spring at Harrogate. *Chem. News*, vol. xv., pp. 244, 245.
- 28 MYRTLE, A. S. Practical Observations on the Harrogate Mineral Waters, with Cases Illustrative of their Action. *Glasgow Med. Journ.*, vol. i., pp. 409-425. Discussion, pp. 489-494. Afterwards published in book form and went through many editions. Pp. 98. 8vo. *London*, 1867. Ed. 2, 1869. Ed. 3, 1874. Ed. 4, *Harrogate*, 1893.
- 29 OWEN, R.—On the Mandible and Mandibular Teeth of Cochliodonts. [*Cochliodus compactus*, Carboniferous Limestone, Yorkshire, plate iv.]. *Geol. Mag.*, vol. iv., pp. 59-63.
- 30 PHILLIPS, J.—A Monograph of the British Belemnitidæ. Pt. 3, Liassic Belemnites. [Many Yorkshire species]. Pp. 53-88; plates viii.-xx. *Monogr. Pal. Soc.*, vol. xx., for the year 1866.
- 31 SIMPSON, MARTIN.—Synopsis of the Contents of the Whitby Museum [includes geological specimens]. *Whitby Repository*, August, pp. 68-75. Also reprinted separately.
- 32 SIMPSON, W.—A brief account of the Alom Works at Whitby [in 1669]. *Whitby Repository*, February, pp. 284-286.
- 33 S[PENCER], J.—Popular Geology [Yorkshire]. *The Circulator (Halifax)*, pp. 3-7.
- 34 ——— The Strata of Halifax. *Ibid.*, pp. 20-25 and pp. 47-53.
- 35 ——— A Day's Ramble amongst the Low-Moor Coal Pits. *Ibid.*, pp. 82-87.
- 36 ——— A Geological Ramble to Ingleborough. *Ibid.*, pp. 95-100; and pp. 111-117.

- 37 WRIGHT, T.—On Coral Reefs Present and Past. [Yorkshire, pp. 155-158]. *Proc. Cotteswold Nat. Club*, vol. iv., pp. 97-173.
- 38 YOUNG, GEORGE.—On the Geology and Scenery of Craven, in Yorkshire (in 1836). *Whitby Repository*, May, pp. 428-431.
- 39 YOUNG J.—[See J. W. Kirkby].

1868.

- 1 ANON—Reports of the Inspectors of Mines. *Parliamentary Reports*. Fol. London.
- 2 AITKIN, —.—[See T. Newbiggen].
- 3 BAGNALL, C.—Coal, A lecture delivered to the Whitby Literary and Philosophical Society. *Whitby Repository*, January, pp. 249-255; February, 298-305; March 329-336; April 369-373.
- 4 BINNEY, E. W.—Observations on the Structure of Fossil Plants found in the Carboniferous Strata. [Yorkshire, pp. 11, 12, 83, 84, and plates iii., xix., xxiv.,]. Pp. 147; plates xxiv. *Monogr. Pal. Soc.*, vol. xxi., for the year 1867.
- 5 BRODRICK, J. B.—The Whitby Literary and Philosophical Society, from its commencement in 1823 to the year 1848. *Whitby Repository*, March, pp. 337-342; April 380-388; May, 414-420; June, 451-456. (Also re-printed separately).
- 6 CARTER, R.—Observations on Ventilation. *Proc. Yorks. Geol. Soc.*, vol. iv., p. 619.
- 7 CROSSLEY, W.—The Ironstone of Cleveland and Lincolnshire [with Analyses]. *Trans. Cleveland Lit. and Phil. Soc.* (Science Section), No. 1, vol. i., Dec., pp. 6-7.
- 8 ——— Note on the Changes termed Weathering as applied to Ironstones, Shales, etc. *Ibid.*, p. 6.
- 9 GREEN, A. H.—Sea-cliffs and Escarpments. [Rivelin Valley]. *Geol. Mag.*, vol. v., pp. 40-42.
- 10 ——— On the Geology of the Barnsley Coalfield. *Proc. Yorks. Geol. Soc.*, vol. iv., pp. 604-610.
- 11 ——— Explanation of Horizontal Section, Sheet 69. Revised edition, 1873. *Geological Survey*. 8vo. London.
- 12 HIGGINS, W. M.—The Geological Distribution of the Ores

- of Iron. [Yorkshire, p. 267]. *Coll. Guard.*, vol. xv., pp. 106, 107, 218, 267, 268. Also pp. 8. 4to. *London*.
- 13 HOBKIRK, C. P.—Huddersfield, its History, etc. [See 1859].
- 14 HUGHES, T. MCK.—Notes on the Geology of Parts of Yorkshire and Westmorland. *Proc. Yorks. Geol. Soc.*, vol. iv., pp. 565-577.
- 15 HULL, E.—Observations on the Relative Ages of the Leading Physical Features and Lines of Elevation of the Carboniferous District of Lancashire and Yorkshire. *Quart. Journ. Geol. Soc.*, vol. xxiv., pp. 323-335. Abstract in *Geol. and Nat. Hist. Rep.*, vol. ii., pp. 121-122.
- 16 HUNT, R.—The Iron Ores of Great Britain. *Quart. Journ. Sci.*, vol. v., pp. 31-39.
- 17 HUTCHINSON, J.—Some Remarks on Fire Damp and Safety Lamps. *Proc. Yorks. Geol. Soc.*, vol. iv., pp. 610-619.
- 18 JONES, JOHN.—The Geological Structure of Cleveland. *Trans. Cleveland Lit. and Phil. Soc.* (Science Section), No. 1, vol. i., Dec., pp. 1-5.
- 19 JUDD, J. W.—On the Speeton Clay. *Quart. Journ. Geol. Soc.*, vol. xxiv., pp. 250-255.
- 20 MAW, G.—On the Disposition of Iron in variegated Strata. [Clapham, Yorkshire, p. 368]. *Quart. Journ. Geol. Soc.*, vol. xxiv., pp. 351-400.
- 21 MIALL, L. C.—On a System of Anticlinals in South Craven. *Proc. Yorks. Geol. Soc.*, vol. iv., pp. 577-588.
- 22 MONKMAN, CHARLES.—On Ancient Flint and Stone Implements from the Surface Soil Yorkshire. *Yorks. Arch. and Topog. Journ.*, vol. i., pp. 24-40.
- 23 MOORE, C.—Mineral Veins.—[See 1869].
- 24 MUSPRATT, J. S.—Recent Analysis of the Water of the 'Old Sulphur Well,' Royal Pump Room, Harrogate. *Chem. News*, vol. xviii., pp. 155, 156.
- 25 ——— Recent Analysis of the 'Hospital Mild Sulphur Spring,' or 'Magnesia Water,' Royal Pump Room, Harrogate. *Ibid.*, p. 195.
- 26 NEWBIGGEN, T.—History of the Forest of Rossendale, with a Chapter on the Geology of Rossendale, by CAPTAIN AITKEN; and Observations on the Botany of the District,

- by ABRAHAM STANSFIELD. [Geology, pp. 255-284]. Pp. xx., 337. 8vo. *London and Bacup*.
- 27 PATTISON, S. R.—Formation of Valleys. A Description of Hendsheope. [Middleton in Teesdale]. *Geol. Mag.*, vol. v., pp. 161-163.
- 28 PHILLIPS, J.—Notice of the Hessle Drift, as it appeared in Sections about Forty Years since. *Quart. Journ. Geol. Soc.*, vol. xxiv., pp. 250-255.
- 29 REID, H.—A Practical Treatise on the Manufacture of Portland Cement. [Analyses of Cement Stones and Limestones, pp. 15, 16]. 8vo. *London*.
- 30 REYNOLDS, R.—On the Fire and Choke Damp Indicator. *Proc. Yorks. Geol. Soc.*, vol. iv., pp. 545-553.
- 31 ROBINSON, H.—A Lecture on the Cleveland Ironstone District of Yorkshire. 8vo. *London*.
- 32 ROME, J. L.—[See Searles V. Wood].
- 33 SIMPSON, M.—A Guide to Geology of Yorkshire Coast. Ed. 4. [See 1859].
- 34 STANSFIELD, A.—[See T. Newbiggen].
- 35 TIDDEMAN, R. H.—The Valleys of Lancashire [and Yorkshire]. *Geol. Mag.*, vol. v., pp. 39, 40.
- 36 TUTE, J. S.—The Geology of the Country near Ripon. *Proc. Yorks. Geol. Soc.* for 1867, vol. iv., pp. 555-565.
- 37 ——— On certain Natural Pits in the Neighbourhood of Ripon. *Geol. Mag.*, vol. v., p. 178. *Proc. Yorks. Geol. Soc.* for 1869, vol. v., pp. 2-7, 1870.
- 38 WHITE, W.—On Dr. Muspratt's Discovery of A New Spa at Harrogate, Chloride of Iron Spring. 16mo. *Harrogate*.
- 39 WOOD, S. V., Jun., and J. L. ROME.—On the Glacial and Post-glacial Structure of Lincolnshire and South-east Yorkshire [with geological map and many sections]. *Quart. Journ. Geol. Soc.*, vol. xxiv., pp. 146-184. Abstract in *Geol. and Nat. Hist. Rep.*, vol. ii., pp. 66-67.
- 40 WOODWARD, H.—Contributions to British Fossil Crustacea. [Lower Oolite, Yorkshire]. *Geol. Mag.*, vol. v., pp. 353-357.

## 1869.

- 1 ANON.—Cleveland and its Metropolis. [With an account of the Geology and analyses]. 8vo. *Middlesborough*.

- 2 ANON.—Reports of the Inspectors of Mines. *Parliamentary Reports*. Fol. London.
- 3 ——— Report of the Royal Commission on Water Supply. [Yorkshire, p. 97, and Appendix, p. 77]. Fol. London.
- 4 ALLEN [E.].—The Speeton Clay. [Report of paper on]. *Proc. Yorks. Nat. Club*, p. 207.
- 5 ——— Chalk fossils from Bridlington [exhibited], *Ibid.*, p. 210.
- 6 ——— The White Chalk and Pits of Hessle, *Ibid.*, p. 213.
- 7 ——— Permian Fossils from Knottingley, *Ibid.*, p. 215.
- 8 ALLISON, THOMAS.—The Whin Dyke of Cleveland. *Trans. Cleveland Lit. and Phil. Soc.* (Science Section), No. 3, vol. i., pp. 3-6 [and two plates of sections].
- 9 ——— On the Cleveland Ironstone. [Geological section]. *Trans. S. Wales Inst. Eng.*, vol. vi., p. 236-243.
- 10 BARRETT, WILLIAM.—Presidential Address. [Geological notes]. *Proc. Cleveland Inst. Engineers*, November 18th, pp. 9-16.
- 11 BEALEY, A.—Dr. Kennion's Observations of the Medicinal Springs of Harrogate. [Prof. Hofmann's analyses, pp. 53-56]. Seventh edition, enlarged and revised. Pp. xx., 56. 8vo. London and Harrogate. Another edition (Hollins'), 1872. [See Kennion, 1853].
- 12 BELL, I. L.—On the Development of Heat, and its appropriation in Blast Furnaces, etc. [Analyses of Cleveland Iron Ores, p. 46]. *Trans. Iron and Steel Inst.*, vol. i., pp. 37-132.
- 13 BEWICK, J.—On Mining in the Mountain Limestone of the North of England. *Trans. N. Inst. Mining Eng.*, vol. xviii., pp. 163-182.
- 14 BLACK, J.—[See 1843].
- 15 BLAKE, J. F.—Fossil Star-fish from the lias of Robin Hood's Bay, probably new to science [exhibited]. *Proc. Yorks. Nat. Club*, p. 209.
- 16 BUTTERWORTH, J.—Entomostraca in Shale [Bradford]. *Science Gossip*, No. 53, pp. 111, 112.
- 17 CARRUTHERS, W.—On some Undescribed Coniferous Fruits from the Secondary Rocks of Britain. [*Araucarites*

- phillipsii*, from Haiburn Wyke, p. 7]. *Geol. Mag.*, vol. vi., pp. 1-7.
- 18 CARRUTHERS, W.—On *Beania*, a New Genus of Cycadean Fruit, from the Yorkshire Oolites. [Gristhorpe Bay]. *Ibid.*, pp. 97-99.
- 19 COCKBURN, WILLIAM.—The Ironstone of the Cleveland District [with sections]. *Proc. Cleveland Inst. Engineers*. November 18th, pp. 17-31; discussion, loc. cit., Dec. 16th, pp. 4-7.
- 20 CROSSLEY, W.—The Origin of Jet. *Trans. Cleveland Lit. and Phil. Soc.* (Science Section). No. 2, vol. i., Jan., pp. 3-4.
- 21 DAKYNS, J. R.—[See A. H. Green].
- 22 DAVIDSON, T.—Notes on Continental Geology and Palæontology. [Speeton, pp. 166, 255, 263]. *Geol. Mag.*, vol. vi., pp. 162-166, 199-205, 251-263, 300-308.
- 23 DAWKINS, W. BOYD.—On the Distribution of the British Post-Glacial Mammals [refers to the Leeds Specimens, etc.]. *Quart. Journ. Geol. Soc.*, vol. xxv., p. 192.
- 24 DAWKINS, W. B., and W. A. SANDFORD.—The British Pleistocene Mammalia. Pt. 3, *Felis spelæa* Goldfuss; *Felis lynx* Linnæus. [Yorkshire, pp. 156, 157]. Pp. 125-176; plates xx.-xxii., xxiii., xxiiB., xxiii. *Monogr. Pal. Soc.*, vol. xxii., for the year 1868.
- 25 EDSON, G.—Tooth of *Elephas primigenius*, found in digging Cliff Waterworks, Cayton Bay. *Proc. Yorks. Nat. Club*, p. 209.
- 26 EGERTON, P. de M. G.—Alphabetical Catalogue of Type Specimens of Fossil Fishes in the Collection of Sir Phillip de Malpas Grey Egerton, Bart., M.P., at Oulton Park. *Geol. Mag.*, vol. vi., pp. 408-413.
- 27 ENNISKILLEN, EARL OF.—Alphabetical Catalogue of Type Specimens of Fossil Fishes in the collection of the Earl of Enniskillen at Florence Court. *Ibid.*, pp. 556-561.
- 28 FOSTER, C. LE NEVE.—[See A. H. Green].
- 29 GODWIN-AUSTIN, R. A. C.—The Geology of Norfolk [address to the British Association; Report Norwich meeting]. Pp. 51-58. Also *Geol. and Nat. Hist. Rep.*, vol. ii., pp. 229-241.

- 30 GREEN, A. H.—On the Coal-measures of the neighbourhood of Rotherham. *Proc. Yorks. Geol. Soc.*, vol. iv., pp. 685-698.
- 31 ——— J. R. DAKYNS, and J. C. WARD.—The Geology of part of the Yorkshire Coal-field. (Quarter Sheet, 88, S.E.). *Geological Survey Memoir*. 8vo. London.
- 32 ——— C. LE NEVE FOSTER, and J. R. DAKYNS.—The Geology of the Carboniferous Limestone, Yoredale Rocks, and Millstone Grit of North Derbyshire and the adjoining parts of Yorkshire. Explanation of Quarter Sheets, 81 N.E., 81 S.E., 72 N.E., and adjoining parts of 88 S.E., 82 N.W., 82 S.W., and 71 N.W. *Memoirs of the Geological Survey*. 8vo. London. Ed. 2, 1887.
- 33 HOFMANN, —.—[See A. Bealey].
- 34 HUXLEY, T. H.—On a new Labyrinthodont from Bradford, with a Note on the Locality of the Fossil, by L. C. Miall. *Quart. Journ. Geol. Soc.*, vol. xxv., pp. 309-311.
- 35 JENKINS, H. M.—Farm Reports. 2, Eastburn Farm, near Driffeld, Yorkshire. [Geological Map, etc., by J. R. MORTIMER]. *Journ. Roy. Agric. Soc.*, ser. 2, vol. v., pp. 399-403; *Geol. Mag.*, vol. vi., p. 570.
- 36 JONES, —.—The Geological Relations of Iron. *Trans. Cleveland Lit. and Phil. Soc.* (Science Section), vol. ii., No. 4., pp. 2-8.
- 37 KENNION, G.—[See 1853]; also under [A. Bealey, 1869].
- 38 MACKINTOSH.—The Scenery of England and Wales: Its Character and Origin. London. Pp. xxiv. + 399.
- 39 MACPHERSON, J.—The Baths and Wells of Europe. . . . [Harrogate, pp. 230-232]. 8vo. London.
- 40 MANSON, D.—On the Sulphur Waters of Strathpeffer in the Highlands of Ross-shire with district guide. [Compared with Harrogate waters, pp. 5, 6, 7, 8, 38]. Pp. 78. 8vo. London. Ed. 2, 1877. Ed. 3, 1879. Ed. 4, 1881. Ed. 5, 1884.
- 41 MEYER, C. J. A.—Note on the Passage of the Red Chalk of Speeton into an Underlying Clay-bed. *Geol. Mag.*, vol. vi., pp. 13, 14.
- 42 MIALL, L. C.—Experiments on Contortion of Mountain Limestone. *Geol. Mag.*, vol. vi., pp. 505-507; *Rep. Brit. Assoc. for 1869, Sections*, p. 97.



- 43 MIALL, L. C.—[See T. H. Huxley].
- 44 MONKMAN, CHARLES.—On the Finding of Flint Implements in the Valley Gravels and in the Hessle Clay of Yorkshire [geological notes]. *Yorks. Arch. and Topog. Journ.*, vol. i, pp. 41-57.
- 45 MOORE, C.—Preliminary Report on Mineral Veins containing Organic Remains in the Carboniferous Limestone. [Fossils from Yorkshire mines]. *Rep. Brit. Assoc. for 1868*, pp. 428, 429; *Geol. Nat. Hist. Rep.*, vol. ii., pp. 249, 250 (1868).
- 46 MORRIS, J.—Geological Notes on Parts of Northampton- and Lincoln- Shires. [Many Yorkshire references]. *Geol. Mag.*, vol. vi., pp. 99-105.
- 47 MORTIMER, J. R.—[See H. M. Jenkins].
- 48 MUSPRATT, J. S.—Analysis of the Water of the Royal Sulphur Spring, Harrogate. *Chem. News*, vol. xx., pp. 26, 68.
- 49 MYRTLE, A. S.—Harrogate Mineral Waters. Ed. 2. [See 1867].
- 50 NICHOLSON, H. A.—Notes on the Green Slates and Porphyries of the Neighbourhood of Ingleton. *Geol. Mag.*, vol. vi., pp. 213-215.
- 51 OWEN, R.—A Monograph of the Fossil Reptilia. [See 1861].
- 52 PHILLIPS, J.—A Monograph of the British Belemnitidæ. Pt. 4, Liassic and Oolitic Belemnities. [Yorkshire, pp. 87, 92, 93, 94, 97, 99, 100, 101]. *Monogr. Pal. Soc.*, vol. xxii., for the year 1868.
- 53 REID, H.—A Practical Treatise on Concrete and how to make it, with observations on the use of cements, limes, and mortars. [Analysis of Huddlestons limestone, p. 10]. Pp. xv., 108. 8vo. *London*. New edition, pp. xxiv., 384, 1879.
- 54 RICKETTS, C.—The Geology of the Neighbourhood of Ingleborough. (Abstract) *Proc. Liverpool Geol. Soc.*, Session 10, pp. 34-36.
- 55 SANDFORD, W. A.—[See W. Boyd Dawkins].
- 56 SHELFORD, W.—On the Outfall of the River Humber. [Boring, p. 473; Waste of Land]. *Proc. Inst. Civ. Eng.*, vol. xxviii., pp. 472-517.

- 57 SPON, —.—Boring and Blasting. [See under N. Wood, 1859].
- 58 TATE, R.—Additions to the List of Brachiopoda of the British Secondary Rocks. [Yorkshire, p. 556]. *Geol. Mag.*, vol. vi., pp. 550-556.
- 59 TYLOR, A.—On Quaternary Gravels. [Aire Valley]. *Quart. Journ. Geol. Soc.*, vol. xxv., pp. 57-100, and 6 plates.
- 60 WARD, J. C.—On Beds of supposed Rothliegende Age, near Knaresborough. *Ibid.*, pp. 291-297.
- 61 ——— [See A. H. Green].  
1870.
- 1 ANON.—Report of the Case of the Queen at the prosecution of Williams v. Nicholson, for removing shingle from the Foreshore at Withernsea. [Hull, May 31st]. 8vo. *Hull*.
- 2 ——— Report of the case of Williams v. Nicholson, for removing Shingle from the Foreshore at Withernsea, etc. Pp. 52. 8vo. *London*.
- 3 ——— Reports of Inspectors of Mines. *Parliamentary Report*. Fol. *London*.
- 4 AITKIN, J.—Presidential Address. [Many allusions to Yorkshire]. *Trans. Manchester Geol. Soc.*, vol. ix., No. 1, pp. 11-26.
- 5 AVELINE, W. T., A. H. GREEN, J. R. DAKYNS, J. C. WARD, and R. RUSSELL. The Geology of the Carboniferous Rocks North and East of Leeds, and the Permian and Triassic Rocks about Tadcaster. (Explanation of Quarter-sheet 93, S.W.). *Geological Survey Memoir*. 8vo. *London*.
- 6 BLAKE, J. F.—The Red Chalk. *Proc. Yorks. Nat. Club* for 1869, p. 217. *Geol. Mag.*, vol. vii., p. 300.
- 7 ——— Large *Ammonites heterophyllus* from Whitby. *Proc. Yorks. Nat. Club*, p. 5.
- 8 BRADY, H. B.—[See C. Moore].
- 9 CARRUTHERS, W.—Review of the Contributions to Fossil Botany published in Britain in 1869. *Geol. Mag.*, vol. vii., pp. 181-184.
- 10 ——— On the Fossil Cycadean Stems from the Secondary Rocks of Britain. *Trans. Linn. Soc.*, vol. xxvi., pp. 675-708. *Geol. Mag.*, vol. vii., pp. 573-577

- 11 COCKBURN, W.—The Ironstone of the Cleveland District. *Proc. Cleveland Inst. Eng.*, Session 1869-70, No. 1.
- 12 DAKYNS, J. R.—[See W. T. Aveline].
- 13 DAWKINS, W. BOYD.—Exploration of Caves at Settle, Yorkshire. *Nature*, vol. i., p. 628; *Proc. Lit. Phil. Soc. Manchester*, vol. ix., pp. 154-157, vol. xi., pp. 9, 10.
- 14 DENNY, H.—On the Occurrence of Flint Implements at Adel, near Leeds, and Suggestions as to the probable period of their deposits. *Proc. Yorks. Geol. Soc.*, vol. v., pp. 24-25.
- 15 DUNCAN, P. M.—Second Report on the British Fossil Corals. [Yorkshire, p. 164]. *Rep. Brit. Assoc. for 1869*, pp. 150-170.
- 16 GREEN, A. H.—[See W. T. Aveline].
- 17 JACKSON, C.—The Diary of Abraham de la Pryme, the Yorkshire Antiquary. [From the original MS. written about 1683]. *The Surtees Society for 1869*, vol. liv.
- 18 JUDD, J. W.—Additional Observations on the Neocomian Strata of Yorkshire, and Lincolnshire, with notes on their Relations to the Beds of the same age throughout Northern Europe. *Quart. Journ. Geol. Soc.*, vol. xxvi., pp. 326-358, pl. xxiii.
- 19 KENNION, G.—[See 1853].
- 20 LECKENBY, J.—Trigoniae from the Yorkshire Rocks [exhibited]. *Proc. York. Nat. Club*, p. 13.
- 21 MACKINTOSH, D.—Drift Deposits of West Riding. [See 1871].
- 22 MARLEY, J.—On the Magnetic Ironstone of Rosedale Abbey. *Trans. N. Inst. Mining Eng.*, vol. xix., pp. 193-200.
- 23 MIALL, L. C.—On a new Carboniferous Labyrinthodont from the Neighbourhood of Bradford. [Black Bed Coal at Toftshaw]. *Proc. Yorks. Geol. Soc.*, vol. v., pp. 15-23.
- 24 ——— On the formation of Swallow-holes, or Pits with vertical sides in Mountain Limestone. [Swaledale]. *Rep. Brit. Assoc. for 1870*, Sections, p. 79. *Nature*, vol. ii., p. 526.; *Geol. Mag.*, vol. vii., pp. 513-520.
- 25 MILLER [ROBERT].—Results of Different Methods of Getting Coal. [Sections of Yorkshire Coal Seams]. *Trans. Midl. Inst. Mining Eng.*, vol. i., pp. 37-42.
- 26 MOORE, C.—Report on Mineral Veins in Carboniferous Limestone and their Organic Contents. With notes on

- the Foraminifera, by H. B. BRADY. *Rep. Brit. Assoc.* for 1869, pp. 360-380.
- 27 MYRTLE, A. S.—Hydrotherapeutics; the resources of Harrogate specially considered. [Notes and analyses of the waters]. Pp. 26. 8vo. *Harrogate*.
- 28 PATTINSON, J.—[See E. Williams].
- 29 PEACOCK, W. H.—On the New Red Sandstone of Cleveland and the Rock Salt discovered in it. *Trans. Cleveland Lit. Phil. Soc.*, vol. ii., No. 5. January.
- 30 PHILLIPS, J.—A Monograph of British Belemnitidæ. Part 5. Oxford Clay and Kimmeridge Clay. [Many Yorkshire species]. Pp. 109-128; Pl. xxviii.-xxxvi. *Monogr. Pal. Soc.*, vol. xxiii. for the year 1869.
- 31 RUSSELL, R.—[See W. T. Aveline].
- 32 SABINE, E.—Contributions to Terrestrial Magnetism. No. 12. Magnetic Survey of the British Islands, reduced to the Epoch, 1842-5. *Phil. Trans.*, vol. clx., pp. 265-275.
- 33 SPENCER, J.—Millstone Grit Rocks. [Halifax]. *Trans. Manchester Geol. Soc.*, vol. ix., pt. 1, pp. 55-72.
- 34 SUGDEN, S.—Analyses of the Mineral Waters in the Montpellier Grounds Low Harrogate, with the diseases in which they are used . . . 16mo. *Harrogate*.
- 35 TEW, T. W.—On the Rocks of the Neighbourhood of Pontefract, with some Observations on the Discovery of some Bones of the *Bos primigenius*. *Proc. Yorks. Geol. Soc.*, vol. v., pp. 39-56.
- 36 TINDALL, E.—Remarks on the Extinct Fauna of the East Riding of Yorkshire. [Holderness]. *Proc. Yorks. Geol. Soc.*, vol. v., pp. 7-14.
- 37 TUTE, J. S.—[See 1868].
- 38 WALKER, J.—Gravel Pit at Nunthorpe [with list of boulders]. *Proc. Yorks. Nat. Club*, pp. 5-6.
- 39 WARD, J.—[See W. T. Aveline].
- 40 WILLIAMS, E.—On the Blast Furnaces at the Cleveland Iron Works. [Analyses by J. PATTINSON, pp. 384, 385]. *Trans. S. Wales Inst. Eng.*, vol. vi., pp. 276-285; Discussion, pp. 286-288.
- 41 WILLIAMSON, W. C.—Contributions towards the History of *Zamia gigas* L. and H. *Trans. Linn. Soc.*, vol. xxvi., pt. 4, pp. 663-674, pl. 4, 5.

- 42 WOOD, S. V., Junr.—On the Relation of the Boulder-Clay, without Chalk, of the North of England to the Great Chalky Boulder-Clay of the South. *Quart. Journ. Geol. Soc.*, vol. xxvi., pp. 90-110 ; *Geol. Mag.*, vol. vii., p. 40.
- 43 ——— Observations on the Sequence of the Glacial Beds. *Geol. Mag.*, vol. vii., pp. 17-20, 61-68.
- 44 WOODWARD, H.—Contributions to British Fossil Crustacea. [From the Carboniferous Limestone of Settle, pp. 554-560]. *Geol. Mag.*, vol. vii., pp. 493-497, 554-560.
- 45 WRIGHT, T.—On the Correlation of the Jurassic Rocks, in the Department of the Cote-d'Or, France, with the Oolitic formations in the counties of Gloucester and Wilts., England. [Yorkshire, p. 208]. *Proc. Cotteswold Nat. Club* for 1869, pp. 143-237 ; *Geol. Mag.*, vol. vii., pp. 568-571.
- 46 ——— A Monograph of the British Fossil Echinodermata from the Cretaceous Formations, vol. i., pt. iii. On the *Diademadæ* [*Cyphosoma königi* from the Upper Chalk, p. 134]. Pp. 113-136, pl. xxii.-xxix., xxixA., xxixB.. *Monogr. Pal. Soc.*, vol. xxiii. for the year 1869.

## 1871.

- 1 ANON.—Report of the Commissioners appointed to enquire into the several matters relating to Coal in the United Kingdom. [Report by PROF. RAMSAY, vol. i., pp. 119-145. Evidence given by A. H. GREEN and J. C. WARD, vol. ii., pp. 119-145]. 3 vols. Fol. London.
- 2 ——— Reports of the Inspectors of Mines. *Parliamentary Reports*. Fol. London.
- 3 ALLEN, E.—Fossils from Bridlington ['Crag']. *Proc. Yorks. Nat. Club.*, pp. 5-6.
- 4 BAINES, T.—Yorkshire past and present : A History and a Description of the Three Ridings of the Great County of York, from the earliest ages to the year 1870 ; with an Account of its Manufactures, Commerce, and Civil and Mechanical Engineering. [Geology and Agriculture, pp. 9-106 ; Harrogate, vol. ii., p. 610]. 2 vols., bound in four, issued in parts, 1871-1877. 4to. London.
- 5 BELL, J., and J. JONES.—Iron Ores Committee—Northumberland, Durham, and the North Riding of Yorkshire.

- [Analyses of rock from Eston, Normanby and Upleatham].  
*Journ. Iron and Steel Inst.*, vol. ii., pp. 33-37.
- 6 BLAKE, J. F.—Lias fossils from Whitby [including operculum of an ammonite, called by some ' *Trigonellites whitbiensis*,' and 'scale-fish' (*Lepidotus*)]. *Proc. Yorks. Nat. Club.*, p. 12.
- 7 ——— Foraminifera from the Lias of Cliffe, near Market Weighton, *Ibid.*, p. 13.
- 8 CARRUTHERS, W.—On some Vegetable Structures recently discovered in the Lower Coal Beds at Halifax. *First Rep. Croydon Micros. Club*, p. 26.
- 9 ——— Review and Synopsis of the Contributions to Fossil Botany published in Britain in 1870. *Journ. Bot.* for April, 1871. *Geol. Mag.*, vol. viii., pp. 218-220.
- 10 CHAMBERS, W. H.—Outbursts of Gas, describing five outbursts which have taken place in the Silkstone Seam, at Newton Chambers and Company's Thorncliffe Collieries, near Sheffield. [Colliery plans]. *Trans. Midl. Inst. Mining Eng.*, vol. ii., pt. 12, pp. 189-197.
- 11 CHAMBERS, W. and S.—Firth's Improvements in Coal Cutting [Section of Coals at Tinsley Colliery of the West Ardsley Coal and Iron Co.]. *Trans. Midl. Min. Eng.*, vol. ii., pp. 233-246; Discussion, pp. 247-249.
- 12 DAKYNS, J. R.—[See A. H. Green].
- 13 DAUBRÉE, A.—Des terrains stratifiés, considérés au point de vue de l'origine des substances qui les constituent et du tribut que leur ont apporté les parties internes du globe. [Yorkshire, pp. 322-326]. *Bull. Soc. Geol. Fr.*, ser. 2, t. xxviii., No. 4, pp. 305-363.
- 14 DAVIDSON, T. A.—Monograph of the British Fossil Brachiopoda. Part 7, No. 4. The Silurian Brachiopoda. [Yorkshire, plates 38, 47]. *Monogr. Pal. Soc.*
- 15 DAVIES, W.—Alphabetical Catalogue of Type Specimens of Fossil Fishes in the British Museum. [*Lepidotus rugosus* from Whitby]. *Geol. Mag.*, vol. viii., pp. 208-216, 334.
- 16 DAWKINS, W. BOYD.—Exploration of the Victoria Cave, Settle, Yorkshire. *Rep. Brit. Assoc.* for 1870, Sections, pp. 148, 149; *Journ. Anthropol. Soc.*, vol. i., pp. 60-70; *Nature*, vol. v., p. 135; *Proc. Lit. Phil. Soc. Manchester*, vol. ix., pp. 154-157, vol. xi., pp. 9, 10.

- 17 DAWKINS, W. BOYD.—On the Formation of the Caves around Ingleborough. *Trans. Manchester Geol. Soc.*, vol. x., No. 2, pp. 106-112.
- 18 DENNY, H.—Notice of the Discovery of a Pair of Ancient Shoes and a Human Skeleton in a Peat Moss on Austwick Common, near Clapham, Yorkshire. *Proc. Yorks. Geol. Soc.*, vol. v., p. 162.
- 19 GRAINGE, W.—The History and Topography of Harrogate, and the Forest of Knaresborough. [Geology, pp. 22-30 ; Harrogate Waters, pp. 127-147]. 8vo. *Pateley Bridge and London*. Another Ed. Pp. xii., 511, 1882.
- 20 GREEN, A. H., J. R. DAKYNS, J. C. WARD, and R. RUSSELL. The Geology of the Neighbourhood of Dewsbury, Huddersfield, and Halifax. (Explanation of Quarter Sheet 88 N.E.). *Geological Survey Memoir*. Pp. 10. 8vo. *London*.
- 21 — [See Anon.].
- 22 HAVILAND, A.—The Geographical Distribution of Heart Disease and Dropsy in England and Wales, illustrated by a large coloured map. [Influence of East Yorkshire rocks, p. 27]. Pp. 61. Fol. *Edinburgh and London*. Another Edition. Pp. 116. 1875.
- 23 HAWKSHAW, J. C.—Notes on the Peat and Underlying Beds observed in the Construction of the Albert Dock, Hull. (Abridged). *Quart. Journ. Geol. Soc.*, vol. xxvii., pp. 237-240.
- 24 HODGSON, C.—Longwall and its Modifications. [Kippax Colliery]. *Trans. Midl. Inst. Eng.*, vol. i., pp. 124-130.
- 25 HULL, E.—On the causes which seem to have regulated the relative distribution of the Calcareous and Sedimentary Strata of Great Britain with special reference to the Carboniferous Formation. *Trans. Glasgow Geol. Soc.*, vol. iii., pp. 33-44 ; *Geol. Mag.*, vol. v., pp. 143-146.
- 26 JONES, J.—On the General Geological Features of the Cleveland Iron District. *Proc. Inst. Mech. Eng.*, pp. 184-199 ; *Journ. Iron & Steel Inst.*, vol. ii., pp. 172-175. *Rev. univ. Mines*, t. xxxiv., pp. 69-81, 1873.
- 27 — [See J. Bell].
- 28 JUDD, J. W.—On the Anomalous Mode of Growth of Certain Fossil Oysters. [Cornbrash of Scarborough]. *Geol. Mag.*, vol. viii., pp. 355-359.

- 29 MACKINTOSH, D.—On the Nature, Correlation, and Mode of Accumulation of the Drift-Deposits of the West Riding of Yorkshire; with Remarks on the Origin of Escarpments, Valleys, and Outlet-gorges, and an Appendix on the Cliffs of Plumpton, Brimham, Goredale, and Malham. *Proc. Yorks. Geol. Soc.* for 1870, vol. v., p. 130-134; *Geol. Mag.*, vol. vii., pp. 284-286, 1870.
- 30 MACPHERSON, J.—Our Baths and Wells: The Mineral Waters of the British Islands, with a list of Sea Bathing Places. [Harrogate, pp. 126-138]. Pp. 205. 8vo. *London and New York*.
- 31 MIAL, L. C.—Swallow Holes. [See 1870].
- 32 MILLER, R.—Outbursts of Gas, describing two heavy outbursts from the floor under the Silkstone Coal at Strafford Main Colliery, and the Results of Experiments in the Presence of Gas in Mines. [Section of borehole]. *Trans. Midl. Inst. Mining Eng.*, vol. i., pp. 155-164.
- 33 MORRISON, W.—On the Exploraation of the Settle Caves, Yorkshire. (Abstract). *Trans. Plymouth Inst.* [? vol. iv., pt. 2]. Session, 1870-71, pp. 108-110.
- 34 RAMSEY, —.—[See Anon.].
- 35 ROWLEY, W.—Some Observations on Coal and Coal Mining and the Economical Working of our Coal Fields. [Section of Coal-measures]. *Proc. Yorks. Geol. Soc.*, vol. v., pp. 229-246.
- 36 RUSSELL, R.—[See A. H. Green].
- 37 SEWELL, E.—On some Peculiar Geological Features of Rombold's Moor. [Geological notes in Wharfedale]. *Proc. Yorks. Geol. Soc.*, vol. v., pp. 221-229.
- 38 SHEAHAN, J. J.—History and Topography of the Wapentake of Claro, being a supplementary volume to T. Whellan and Co.'s History of York and the North Riding. [Harrogate, pp. 137-151; Devil's Arrows, p. 186]. Vol. iii., 8vo. *Beverley*. [See 1855].
- 39 STEVENSON, W. F.—[See J. R. Walbran, 1844].
- 40 TUTE, J. S.—Fossil Oolitic Plants [Scarborough]. *Science Gossip*, No. 79, pp. 157-158.
- 41 WALBRAN, J. R.—[See 1844].
- 42 WARD, J. C.—[See A. H. Green].
- 43 ——— [See Anon.].



- 44 WILLS, H.—The Lias of Whitby. *Trans. Clifton Coll. Sci. Soc.*, p. 92, pl. 1.
- 45 WOOD, S. V., Jun.—Mr. Croll's Hypothesis of the Formation of the Yorkshire Boulder-clay. *Geol. Mag.*, vol. viii., p. 92.
- 46 WOODWARD, H.—On some new Phyllopodous Crustaceans from the Palæozoic Rocks. [*Dithyrocaris tenuistriatus* from Settle]. *Geol. Mag.*, vol. viii., pp. 104-107.
- 47 WILLIAMSON, W. C.—On the Organization of the Fossil Plants of the Coal-Measures.—Part 1, Calamites. *Phil. Trans.*, vol. clxi., pp. 477-510.
- 48 WRIGHT, T.—Monograph on the British Fossil Echinodermata from Cretaceous Formations, vol. i., pt. 4. On the Diademadæ and Solenidæ. [Yorkshire, pp. 152, etc.]. *Monogr. Pal. Soc.*

1872.

- 1 ANON.—The Illustrated Price Book for 1872, for the use of Architects, Engineers, Surveyors, Builders, etc. [Tables of sandstones and limestones used in building, also analyses]. 12mo. *London*.
- 2 ——— Reports of the Inspectors of Mines. *Parliamentary Report*. Fol. *London*.
- 3 AVELINE, W. T., and T. MC K. HUGHES.—The Geology of the Country around Kendal, Sedbergh, Bowness, and Tebay (98 N.E.). *Geological Survey Memoir*. 8vo. *London*. Ed. 2, 1888.
- 4 ——— T. MC K. HUGHES, and R. H. TIDDEMAN.—The Geology of the Neighbourhood of Kirkby Lonsdale and Kendal (98 S.E.). *Geological Survey Memoir*. 8vo. *London*.
- 5 BEALEY, A.—Medicinal Springs of Harrogate. [See 1869].
- 6 BELL, T. L.—On the Cleveland Ironstone—Its Discovery and its Influence on the Trade of the District. *Coll. Guard.*, vol. xxiii., pp. 607, 608.
- 7 BINNEY, E. W.—Observations on the Structure of Fossil Plants found in the Carboniferous Strata. Pt. 3, Lepidodendron. [*Halonias gracilis*, from Yorkshire] Pp. 63-96; plates xiii.-xviii *Monogr. Pal. Soc.*, vol. xxv., for the year 1871.
- 8 BLAKE, J. F.—The Yorkshire Lias and the Distribution of its Ammonites. *Rep. Brit. Assoc.* for 1871, Sections, pp. 90-92.

- 9 BLAKE, J. F.—On the Infralias in Yorkshire. *Quart. Journ. Geol. Soc.*, vol. xxviii., pp. 132-147.
- 10 BRIGGS, J.—On the Geology of the neighbourhood of Keighley. *Proc. Yorks. Geol. Soc.*, vol. vi., pt. 1, pp. 49-53.
- 11 COCKBURN, W.—On the Carboniferous Limestone of South Durham and North Yorkshire. [High Force, Marrybent]. *Trans. N. Eng. Inst. Eng.*, vol. xxi., pp. 251-270. plates i.-vii., [Geological Map of Yorkshire and section].
- 12 DALTON, W. H.—On the Geology of Craven. *Proc. Yorks. Geol. Soc.*, vol. vi., pt. 1, pp. 16-22.
- 13 DAKYNS, J. R.—On the Glacial Phenomena of the Yorkshire Uplands. [Gravels of the Vale of York]. *Quart. Journ. Geol. Soc.*, vol. xxviii., pp. 382-388.
- 14 DUNCAN, P. M.—A Monograph of the British Fossil Corals. Second Series. Being a Supplement to the Monograph of the British Fossil Corals by M.M. Milne Edwards and Jules Haime. Pt. 3, Corals from the Oolitic Strata. [Yorkshire, pp. 12, 13, 22]. Pp. 1-24; plates i.-vii. (with a General Index to the Tertiary, Cretaceous, Oolitic and Liassic Corals). *Monogr. Pal. Soc.*, vol. xxvi., for the year 1872.
- 15 EVANS, JOHN.—The Ancient Stone Implements, Weapons and Ornaments, of Great Britain [jet, etc., in Yorkshire]. See also under 1897.
- 16 GEIKIE, A.—[See J. B. Jukes].
- 17 GREEN, A. H.—On the Method of Formation of the Permian Beds of South Yorkshire. *Geol. Mag.*, vol. ix., pp. 99-101.
- 18 HARMER, F. W.—[See S. V. Wood].
- 19 HOLLINS, —.—Handbook for Harrogate. [Contains Dr. Kennion's 'Observations on the Medicinal Springs of Harrogate']. [See under Kennion, 1853].
- 20 HUGHES, S. A.—Treatise on Waterworks. [See 1856]. Ed. by A. Silverthorne.
- 21 HUGHES, T. Mc K.—[See W. T. Aveline].
- 22 JUKES, J. B.—Manual of Geology. Ed. by A. Geikie. [See 1857].
- 23 KENNION, —.—[See —. Hollins].

- 24 LUCAS, J.—The Permian Beds of Yorkshire. *Geol. Mag.*, vol. ix., pp. 338-343.
- 25 LUBBOCK, J.—Prehistoric Times. Ed. 3. [See 1865].
- 26 LYCETT, J.—A Monograph of the British Fossil Trigonïæ. [Yorkshire, pp. 12, 17]. No. 1, pp. 1-52; plates i.-ix. *Monogr. Pal. Soc.*, vol. xxvi., for the year 1872.
- 27 LYELL, C.—[See 1830].
- 28 MIALL, L. C.—On Contortion of Rocks. [Limestone of Draughton]. *Proc. Yorks. Geol. Soc.*, vol. vi., pt. 1, pp. 3-15; *Pop. Sci. Rev.*, vol. xi., pp. 21-31.
- 29 — On the Structure of Ganoid Fishes introductory to an Account of the Ganoid Fishes of the Yorkshire Coal-Field. *Proc. Yorks. Geol. Soc.*, vol. vi., pp. 24-45.
- 30 NICHOLSON, H. A.—On the Silurian Rocks of the English Lake District. [Includes a part of Yorkshire]. *Proc. Geol. Assoc.* vol. iii., pp. 105-114.
- 31 — A Manual of Palæontology for the use of students. *London*. Pp. xvi. + 601.
- 32 PAINTER, W. H.—Carboniferous Fish. [Halifax Coal Bed]. *Science Gossip*, No. 7, pp. 176-177.
- 33 RAMSAY, A. C.—On the River-courses of England and Wales. *Quart. Journ. Geol. Soc.*, vol. xxviii., pp. 148-160.
- 34 RILEY, E.—The Manufacture of Iron and Steel. [Analyses of Yorkshire Mountain Limestone and Ironstone, p. 535]. *Journ. Chem. Soc.*, ser. 2, vol. x., pp. 533-565.
- 35 SILVERTHORNE, A.—[See S. A. Hughes].
- 36 TATE, R.—A Class-Book of Geology, Physical and Historical. In two parts. 12mo. *London*. Ed. 2, 1879.
- 37 — Note on the Discovery of the Oldest Known Trigonïa (*T. lingonensis* Dumortier) in Britain. [Ironstone of Upleatham]. *Geol. Mag.*, vol. ix., p. 306.
- 38 TIDDEMAN, R. H.—On the Evidence for the Ice-sheet in North Lancashire and adjacent Parts of Yorkshire and Westmorland. *Quart. Journ. Geol. Soc.*, vol. xxviii., pp. 471-491.
- 39 — Discovery of Extinct Mammals in the Victoria Caves, Settle. *Nature*, vol. vi., pp. 127, 128.
- 40 — [See W. T. Aveline].
- 41 TINDALL, J.—A Geological Visit to Askern. *Yorks. Nat. Rec.*, No. 1, p. 5; No. 2, p. 24.

- 42 WARD, J. C.—On Rock-Staining. [Permian and Millstone Grit.] *Geol. Mag.*, vol. ix., pp. 389-391.
- 43 WILLIAMSON, W. C.—On the Structure of the Dictyoxylons of the Coal-measures. [Lower Coal-measures of Lancashire and Yorkshire]. *Rep. Brit. Assoc. for 1871*, Sections, pp. 111, 112.
- 44 WOOD, S. V.—Supplement to the Monograph of the Crag Mollusca, with description of Shells from the Upper Tertiaries of the East of England. Vol. iii., Univalves and Bivalves, an Introductory Outline of the Geology of the same District, and Map, by S. V. WOOD, Junr., and F. W. HARMER. [Yorkshire, pp. xxiv.-xxx., 9, 19, 22, 24-27, 31, 38-40, 42, 43, 53, 76, 78, 80, 92, 93]. Pp. i.-xxi., 1-99 ; plates i.-vii. *Monogr. Pal. Soc.*, vol. xxv., for the year 1871.
- 45 WOOD, S. V., Junr.—On the Climate of the Post-Glacial Period. [Kelsea Hill]. *Geol. Mag.*, vol. ix., pp. 153-161.
- 46 ——— Reply to Mr. James Geikie's Correlation of the Scotch and English Glacial Beds. *Ibid.*, pp. 171-176.
- 47 ——— Further Remarks on Mr. James Geikie's Correlation of Glacial Deposits. *Ibid.*, pp. 352-355.

## 1873.

- 1 ANON.—Our Coalfields: South Yorkshire. *Iron*, vol. i., pp. 357, 358.
- 2 ——— Reports of the Inspectors of Mines. *Parliamentary Report*. Fol. London.
- 3 BAINES, T.—Yorkshire, Past and Present. 4to. [Meteorology, etc.].
- 4 BLAKE, J. F.—The oldest known British Trigonía. *Geol. Mag.*, vol. x., p. 186.
- 5 BROCKBANK, W.—Notes on the Victoria Cave, Settle. *Proc. Lit. Phil. Soc., Manchester*, vol. xii., pp. 95-103.
- 6 BUSH, G.—Men in the Settle Cave. *Nature*, vol. ix., p. 70.
- 7 CARRUTHERS, W.—Tree forms of Coal Measures. *Quart. Journ. Geol. Soc.*, vol. xxix., p. 308.
- 8 DAKYNS, J. R.—On some Points connected with the Drift of Derbyshire and Yorkshire. *Geol. Mag.*, vol. x., pp. 62-64.

- 9 DAVIS, R. H.—Monthly Analytical Examinations of the Harrogate Spas, 1872. *Journ. Chem. Soc.*, New Ser., vol. xi.; Entire Ser., vol. xxvi., pp. 1089-1092.
- 10 DAWKINS, W. BOYD.—Report on the Results obtained by the Settle Cave Exploration Committee out of Victoria Cave in 1870. *Journ. Anthropol. Inst.*, vol. i., pp. 60-66. *Nature*, vol. vii., pp. 374, 375; *Proc. Lit. Phil. Soc., Manchester*, vol. xii., 61-65, 111.
- 11 ——— and R. H. TIDDEMAN. Report on the Victoria Cave, explored by the Settle Cave Exploration Committee. *Rep. Brit. Assoc. for 1872, Sections*, pp. 178-180.
- 12 DE RANCE, C. E.—On the Occurrence of Lead, Zinc, and Iron Ores, in some Rocks of Carboniferous Age in the North-west of England. [Lancashire and Yorkshire]. *Geol. Mag.*, vol. x., pp. 64-74.
- 13 EVANS, F. J.—On the present amount of Westerly Magnetic Declination [Variation of the Compass] on the Coast of Great Britain and its Annual changes. [Bridlington Quay and Spurn Point]. *Phil. Trans.* for the year 1872, vol. clxii., pp. 319-330.
- 14 FISHER, O.—[Letter on] The Settle Cave Deposits. *Geol. Mag.*, vol. x., p. 95.
- 15 GREEN, A. H.—Explanation of Horizontal Section, sheet 69. [See 1868].
- 16 HUGHES, T. McK.—On a Series of Fragments of Chert collected below, a chert-bearing Limestone in Yorkshire. [Ingleborough]. *Rep. Brit. Assoc.*, for 1872, Sections, p. 189.
- 17 HULL, E.—The Coal Fields of Great Britain. Ed. 3. [See 1860].
- 18 JONES, J.—Sur la Géologie du District Sidérurgique du Cleveland, considérée dans ses traits générales. *Rev. univ. Mines*, t. xxxiv., pp. 69-81; translated from *Proc. Mech. Eng.*, 1871, pp. 184-199. [See 1871].
- 19 LECKENBY, J.—The oldest known British Trigonía. *Geol. Mag.*, vol. x., p. 135.
- 20 LUCAS, J.—On the Origin of Clay-Ironstone. *Quart. Journ. Geol. Soc.*, vol. xxix., pp. 363-369; *Iron*, n. ser., vol. i., p. 453.

- 21 LYELL, C.—The Geological Evidences of the Antiquity of Man. Ed. 4. [See 1863].
- 22 MIALL, L. C.—The Permian Rocks of the Neighbourhood of Leeds. *Leeds Nat. Field Club*, Aug. 5th, 1873; *Geol. Mag.*, vol. x., pp. 421, 422; *Nature*, vol. viii., p. 335.
- 23 MORTIMER, R.—Notes on Markings in the Chalk of the Yorkshire Wolds. *Quart. Journ. Geol. Soc.*, vol. xxix., pp. 417-419.
- 24 RAMSAY, ANDREW C.—Geological Map of England and Wales. Ed. 3 [with sections].
- 25 RUSSELL, R.—Geology of the District round Bradford, Yorkshire. *Iron*, n. ser., vol. ii., pp. 458, 459, 491, 492; *Rep. Brit. Assoc. for 1873*. Sections, pp. 88-91. [See also 1874 and 1875].
- 26 THORNE, T.—Report on the Prevalence of Infectious Diseases in Doncaster, and on the Sanitary Condition of the Borough. [Analyses of water]. *Local Government Board*. Pp. 9. Fol. London.
- 27 TIDDEMAN, R. H.—The Older Deposits in the Victoria Cave, Settle, Yorkshire. *Geol. Mag.*, vol. x., pp. 11-16.
- 28 ——— The Relation of Man to the Ice-sheet in the North of England. *Nature*, vol. ix., pp. 14, 15.
- 29 ——— The Physical History of the Deposits in the Victoria Cave. *Rep. Brit. Assoc. for 1872*, Sections, pp. 179, 180.
- 30 ——— [See W. Boyd Dawkins].
- 31 TUTE, J. S.—A Probably New Species of *Orthoceras* (*Orthoceras pennatum*). [In Millstone Grit, 7 miles S.W. of Ripon]. *Hardwicke's Science Gossip*, No. 103, pp. 154, 155, Figs. 87-97; an abstract of this in *Proc. Yorks. Geol. Soc.*, vol. vii., pt. 1, pp. 82, 83, 1879.
- 32 WILLIAMSON, W. C.—On the Structure of the Dictyoxylons of the Coal-measures. [Lower Coalmeasures of Lancashire and Yorkshire]. *Rep. Brit. Assoc. for 1871*, Sections, pp. 111, 112.  
1874.
- 1 ANON.—Extraordinary Development of the Yorkshire Coal-field. *Coll. Guard.*, vol. xxvii., p. 756.
- 2 ——— Guide to Harrogate, Ripon, Knaresborough, Fountains Abbey, Studley Park, Hackfall, Plumpton, Harewood House, Brimham Rocks, Bolton Abbey, and all places

- of interest in the district. [Analyses of Harrogate Waters]. Pp. 48. 12mo. *Newcastle-on-Tyne*.
- 3 ANON.—Reports of the Inspectors of Mines. *Parliamentary Report*. Fol. *London*.
- [4 ——— Sixth Report of the Rivers Pollution Commission. Fol. *London*.
- 5 ——— Fifth Report of the Commissioners appointed in 1868 to inquire into the best means of preventing the pollution of rivers. [Don and Calder]. Vol. i., Report and Maps. Pp. 52. Fol. *London*.
- 6 ——— North Sea Pilot.—Pt. 3, East Coast of England, from Berwick to the North Foreland, etc. Ed. 3. *Admiralty Publication*. 8vo. *London*.
- 7 AITKEN, J.—Notes on the Discovery of a New Fish, of the genus *Acrolepis*, Ag., in the Millstone Grit, near Hebden Bridge, Yorkshire. *Trans. Manchester Geol. Soc.*, vol. xiii., pt. 3, pp. 36-43. Discussion, pp. 43-47.
- 8 BARR, T. M.—On the Geology of the North-Eastern District of Yorkshire. *Trans. Glasgow Geol. Soc.*, vol. iv., pt. 3, pp. 291-300.
- 9 BLAKE, J. F.—Note on the Red Chalk in Yorkshire. [Given-dale]. *Geol. Mag.*, dec. 2, vol. i., pp. 362-364.
- 10 ——— Additional Remains of Pleistocene Mammals in Yorkshire. [Bielbecks]. *Rep. Brit. Assoc. for 1873*, Sections, p. 75.
- 11 BOHN [G.].—[See [C.] Oldham].
- 12 BOWER, J. A.—Whitby Jet and its Manufacture. *Journ. Soc. Arts*, vol. xxii., No. 1100, pp. 80-87.
- 13 BRADY, G. S., H. W. CROSSKEY, and D. ROBERTSON.—A Monograph of the Post Tertiary Entomostraca of Scotland including species from England and Ireland. [Yorkshire, pp. 103, 104, etc.]. Pp. v.+232; plates xvi. *Monogr. Pal. Soc.*, vol. xxviii., for 1874.
- 14 ——— [See T. R. Jones].
- 15 BRIGG, J.—On such of the Industries of Bradford as relate to its Geological Position. [Building stone, etc.]. *Rep. Brit. Assoc. for 1874*, Sections, pp. 76, 77; published in full under the title 'The Industrial Geology of Bradford.' Pp. 18. 8vo. *Leeds*.

- 16 BUSK, G.—Notice of a Human Fibula of unusual form, discovered in the Victoria Cave, near Settle, in Yorkshire. *Journ. Anthropol. Inst.*, vol. iii., pp. 392-395.
- 17 CROSSKEY, H. W.—[See G. S. Brady].
- 18 DAKYNS, J. R.—On the Geology of part of Craven. *Rep. Brit. Assoc. for 1873*, Sections, pp. 78, 79. [See 1877].
- 19 DAVIDSON, T.—A Monograph of the British Fossil Brachipoda. Vol. iv., pt. 1. Supplement to the Recent, Tertiary and Cretaceous species. Pp. 72; plates viii. [Yorkshire, pp. 10, 16, 19, 21, 29, 31, 34, 58, 59, 69]. *Monogr. Pal. Soc.*, vol. xxvii., for the year 1873.
- 20 DAVIS, R. H.—Monthly analytical examination of the Harrogate Spa, 1872. *Pharm. Journ.*, vol. iv., pp. 481, 482.
- 21 DAWKINS, W. BOYD.—Report of the Committee appointed for the purpose of Exploring Settle Caves. *Rep. Brit. Assoc. for 1873*, pp. 250, 251.
- 22 ——— Cave Hunting: Researches on the Evidence of Caves respecting the Early Inhabitants of Europe. [Kirkdale, pp. 14, 279-284, 260]. Pp. xix.+455. 8vo. London.
- 23 ——— Observation on the Rate at which Stalagmite is being accumulated in the Ingleborough Caves. *Rep. Brit. Assoc. for 1873*, Sections, p. 80; *Proc. Lit. Phil. Soc., Manchester*, Feb. 1873.
- 24 DICKENSON, J.—On the Saliferous Strata. *Trans. Geol. Soc., Manchester*, vol. xiii., pt. 2, p. 23.
- 25 ELLIS, J. W.—Note on the Stump-Cross Caverns at Greenhow, near Pateley Bridge. *Rep. Brit. Assoc. for 1873*, Sections, p. 80.
- 26 ETHERIDGE, R.—On the Geology of Coal and Coal Deposits in the British Islands. [The Great Midland Coalfield, pp. 97, 98]. *Rep. Brit. Assoc. Gas Managers*, June 1874, pp. 84-109.
- 27 FAIRLEY, T.—Analysis of Water taken from the Old Sulphur Well, Harrogate, Nov. 14th, 1873. *Chem. News*, vol. xxx., No. 774, p. 151.
- 28 FAIRLEY, W.—[See J. S. Hill].
- 29 FOX-STRANGWAYS, C.—The Geology of the Country North and East of Harrogate. [Explanation of Quarter-sheet 93 N.W.]. *Geological Survey Memoir*. 8vo. London. Dated 1873, but not issued till 1874.



- 30 GEIKIE, J.—The Great Ice Age and its relation to the Antiquity of Man. 8vo. *London*. Ed. 2, 1877. Ed. 3, 1894.
- 31 GOMERSALL, W.—The Round-Boulder Hills of Craven. *Rep. Brit. Assoc. for 1873*, Sections, p. 80.
- 32 GOTT, C.—On the Bradford Waterworks. *Rep. Brit. Assoc. for 1873*, pp. 451-458.
- 33 HARMER, F. W.—[See S. V. Wood, Junr.].
- 34 HILL, J. S., and W. FAIRLEY.—The Coal Deposits of Great Britain and the Oolitic Coal of England, Scotland, Sweden, and Denmark. Translated and edited from the German. [The Coal District of Derbyshire and Yorkshire, p. 887 ; Oolitic Coal in Britain, etc., p. 924]. *Coll. Guard.*, vol. xxviii., pp. 670, 705, 743, 744, 815, 851, 887, 888, 923, 924.
- 35 HOBKIRK, C. P.—On the Mosses of the West Riding of Yorkshire. [Geological features]. *Rep. Brit. Assoc. for 1873*, Sections, pp. 104, 105, *Journ. Bot.*, n. ser., vol. ii., p. 327.
- 36 HORNE, W.—On the occurrence in the Yoredale Rocks of Wensleydale of Fish and Amphibian Remains. *Rep. Brit. Assoc. for 1873*, Sections, p. 84.
- 37 HUDLESTON, W. H.—The Yorkshire Oolites. Pt. 1. *Proc. Geol. Assoc.*, vol. iii., No. 7, pp. 283-333 ; Pt. 2, The Middle Oolites, vol. iv., No. 6, pp. 353-410, vol. v., Pt. 3, Section 2, The Coralline Oolites, Coral Rag, and Supracoralline Beds, No. 8, pp. 407-494.
- 38 HUGHES, T. McK.—Exploration of Cave Ha, near Giggleswick, Settle, Yorkshire. *Journ. Anthropol. Inst.*, vol. iii., No. 3, pp. 383-387.
- 39 KIRKBY, J. W.—[See T. R. Jones].
- 40 JONES, T. R., J. W. KIRKBY, and G. S. BRADY.—A Monograph of the British Fossil Bivalve Entomostraca from the Carboniferous Formations. Pt. 1, The Cyprinidæ and their Allies. [Yorkshire, pp. 50, 54]. Pp. 1-56 ; plates i.-v. *Monogr. Pal. Soc.*, vol. xxviii. for the year 1874.
- 41 LUCY, W. C.—The Submerged Forest, Holy Hazle, Sharp Ness . . . [refers to Hull]. *Proc. Cotteswold Nat. Field Club*, vol. vi., pp. 105-125.

- 42 LYCETT, J.—A Monograph of the British Fossil Trigonæ.  
No. 2 [Many Yorkshire species]. Pp. 53-92; plates  
x.-xix. *Monogr. Pal. Soc.*, vol. xxviii., for the year 1874.
- 43 MEADE, R.—The Iron Industries of the North Riding of  
Yorkshire (Cleveland district). *Mining Journ.*, Dec. 19th
- 44 MIALL, L. C.—Note on the Occurrence of a Labyrinthodont  
in the Yoredale Rocks of Wensleydale. *Quart. Journ.  
Geol. Soc.*, vol. xxx., pp. 775, 776.
- 45 MILNER, T.—Our Home Islands: their Natural Features.  
[Loss of Land on the Yorkshire Coast, pp. 288-294].  
Pp. iv., 318. 12mo. *London*.
- 46 MYRTLE, A. S.—Harrogate Mineral Waters. Ed. 3. [See  
1867].
- 47 NEILL, A.—On the Bradford Building Trades [Building  
stones]. *Rep. Brit. Assoc. for 1873, Sections*, pp. 196-  
199.
- 48 ——— On Stone-dressing in Bradford. *Ibid.*, p. 214.
- 49 OLDHAM [C.] and BOHN [G.].—Drainage of Great Driffield.  
Report [with plan]. Pp. 16.
- 50 PAINTER, W. H.—More about Carboniferous Fish. [Bail-  
don]. *Sci. Goss.*, No. 6, pp. 253, 254.
- 51 PHILLIPS, J.—Address to the Geological Section of the  
British Association. *Rep. Brit. Assoc. for 1873, Sections*,  
pp. 70-75.
- 52 PHILLIPS, J. A.—Elements of Metallurgy. A practical  
treatise on the art of extracting metals from their ores.  
[Cleveland Ironstone, p. 141]. Pp. xx.+764. 8vo.  
*London*. Ed. 2; 1887. Ed. 3, 1891.
- 53 PLANT, JOHN.—On bones of *Elephas primigenius* from a  
Cavern near Skipton. *Trans. Manchester Geol. Soc.*,  
vol. xiii., pt. 3, p. 54.
- 54 RENEVIER, E.—Tableau de Terrains sédimentaires formés  
pendant les Époques de la Phase Organique du globe  
terrestre avec leur représentant en Suisse et dans les  
régions classique leurs synonymies et les prinipaux fossiles  
de clique étage. 4to. *Lausanne*.
- 55 ROBERTSON, D.—[See G. S. Brady].
- 56 RUSSELL, R.—Geology of the Country around Bradford,  
Yorkshire. *Rep. Brit. Assoc. for 1873, pp. 88-91*. The  
same as 1873 and 1875 under a different title.

- 57 SMITH, E. I.—Agricultural Geology. [No. 2, Northern Division]. *Trans. Inst. Surveyors*. Vol. vi., pp. 323-342.
- 58 SPENCER, J.—Additional Notes on the Millstone Grit of the Parish of Halifax. *Trans. Manchester Geol. Soc.*, vol. xiii., pt. 4, pp. 103-114.
- 59 ——— Halifax Rough Rock and Flag-Rock. Section showing the manner in which they have run into one another along the eastern edge of Wheatley Valley. *Ibid.*, op. p. 157, should be p. 107.
- 60 ——— Geology of the Parish of Halifax. (The Third Part of the Description of the Millstone Grit Series of the Parish of Halifax, Yorkshire). *Ibid.*, pt. 7, pp. 202-225.
- 61 STEAVENSON, A. L.—Ironstone Mining in Cleveland. *Journ. Iron and Steel Inst.*, No. 2, pp. 329-337; Geological section, plate i.
- 62 TOPLEY, W.—On the Correspondence between some Areas of Apparent Upheaval and the Thickening of subjacent Beds. *Quart. Journ. Geol. Soc.*, vol. xxx., pp. 186-195. *Rep. Brit. Assoc. for 1873*, Sections, p. 91.
- 63 TUTE, S. J.—Organisms in Carboniferous Flint or Chert. [Yoredale Series]. *Science Gossip*, No. 116, p. 118.
- 64 WILLCOCK, J.—On the History, Progress, and Description of the Bowling Ironworks. [Account of strata]. *Rep. Brit. Assoc. for 1873*, Sections, pp. 219-222. Printed in full by the Bowling Ironworks Company.
- 65 WOOD, S. V., Junr., and F. W. HARMER. Supplement to the Monograph of the Crag Mollusca, with description of shells from the Upper Tertiaries of the East of England, by Searles V. Wood, vol. iii. Univalves and Bivalves. With an Introductory Outline of the same district, and Map. [Yorkshire, pp. 100, 101, 105, 114, 116, 119, 137, 138, 139, 142, 144, 151, 153]. Pp. 99-231; plates viii.-xi. *Monogr. Pal. Soc.*, vol. xxvii., for the year 1873.
- 66 WRIGHT, T.—Monograph on the British Fossil Echinodermata from the Cretaceous Formations. Vol. i., pt. 6, On the Echinoconidæ. [Speeton, p. 208]. Pp. 185-224; plates xlv.-lii. *Monogr. Pal. Soc.*, vol. xxvii., for the year 1873.

1875.

- 1 ANON.—Reports of the Inspectors of Mines. *Parliamentary Reports*. Fol. *London*.
- 2 ——— Rivers Pollution Commission (1868).—Sixth Report of the Commissioners appointed in 1868 to inquire into the best means of preventing the Pollution of Rivers. The Domestic Water Supply of Great Britain. [Analyses of Water from Hull and York]. Fol. *London*.
- 3 BINNEY, E. W.—Observations on the Structure of Fossil Plants found in the Carboniferous Strata. Part 4. *Sigillaria* and *Stigmaria*. [*Sigillaria vascularis* from South Oram, p. 136; *Stigmaria ficoides* from Bradford, p. 144]. Pp. 97-147; Plates xix.-xxiv. *Monogr. Pal. Soc.*, vol. xxix. for the year 1875.
- 4 BLAKE, J. F.—On the Kimmeridge Clay of England. *Quart. Journ. Geol. Soc.*, vol. xxxi., pp. 196-233.
- 5 BRADY, G. S., W. CROSSKEY, and D. ROBERTSON.—A Monograph of the Post-Tertiary Entomostraca of Scotland, including species from England and Ireland. [Many Yorkshire species]. Pp. v. 232; Plates xvi. *Monogr. Pal. Soc.*, vol. xxviii. for the year 1874.
- 6 BRAUN, J.—On the Curative Effects of Baths and Waters, being a Handbook to the Spas of Europe. [Harrogate, pp. 217, 291, 464, 465, 466, 471.] An abridged translation with notes by H. WEBER. 8vo. *London*.
- 7 BRODIE, P. B.—On the Lower Lias at Easington and Kington, and on the Rhætics in that neighbourhood, and their further extension in Leicester, Nottinghamshire, Lincolnshire, Yorkshire and Cumberland. *Thirty-ninth Annual Rep. Warwick Nat. Hist. Soc.*, pp. 6-17.
- 8 CROLL, J.—Climate and Time in their Geological Relations. A Theory of Secular Changes of the Earth's Climate. [Yorkshire, pp. 252, 460]. Pp. xvi., 577. 8vo. *London*.
- 9 CROSSKEY, H. W.—Second Report . . . on Erratic Blocks [Keighley]. *Rep. Brit. Assoc.* for 1874, pp. 192-200.
- 10 ——— [See G. S. Brady].
- 11 DAKYNS, J. R.—The Sediment Theory of Drift. *Geol. Mag.*, dec. ii., vol. ii., pp. 168-172.

- 12 DAKYNS, J. R.—[See E. Hull].
- 13 DE RANCE, C. E.—[See E. Hull].
- 14 ETHERIDGE, R.—[See J. Phillips].
- 15 ——— [See J. W. Judd].
- 16 GJERS, J.—A short Historical Sketch of the Rise and Progress of the Cleveland Iron Trade *Trans. Chesterfield Inst. Eng.*, vol. iii., p. 63.
- 17 GOODCHILD, J. G.—The Glacial Phenomena of the Eden Valley and the Western part of the Yorkshire Dale District. *Quart. Journ. Geol. Soc.*, vol. xxxi., pp. 55-99.
- 18 ——— Glacial Erosion. [Yorkshire dales]. *Geol. Mag.*, dec. ii., vol. ii., pp. 323-328, 356-362.
- 19 ——— On the Origin of Coums. *Ibid.*, pp. 486-497.
- 20 GRAINGE, A. W.—Guide to Harrogate. [See 1861].
- 21 GREEN, A. H.—Variation in thickness and character of the Barnsley and Silkstone Coal-seams in South Yorkshire, and the probable origin of this and similar changes. *Coll. Guard.*, vol. xxx., pp. 601, 602; *Trans. N. Eng. Inst. Eng.*, vol. xxv., pp. 13-19, Discussion, pp. 20, 21; *Trans. Midl. Inst. Eng.*, vol. iv., pp. 169-178; *Proc. Yorks. Geol. Soc.*, vol. vi., pt. 2, pp. 68-77; *Rep. Brit. Assoc. for 1875*, Sections, p. 65.
- 22 GUNN, W.—[See E. Hull].
- 23 HAVILAND, A.—The Geographical Distribution of Heart Disease and Dropsy, Cancer in Females, and Phthisis in Females, in England and Wales. [Notes on soils, geology and physical features]. Pp. viii.+116. Fol. London. [See 1871].
- 24 HAWKSHAW, J. C.—The Construction of the Albert Dock at Kingston-upon-Hull. *Proc. Inst. Civ. Eng.*, vol. xli., pp. 92-124.
- 25 HIRSCHFIELD, J., and W. PICKLER.—Die Bader Quellen und Curozte Europa's. [Harrogate, vol. i., p. 409]. 2 vols. 8vo. Stuttgart.
- 26 HUDLESTON, W. H.—Excursion to East Yorkshire. *Proc. Geol. Assoc.*, vol. iv., pp. 326-336.
- 27 HULL, E., J. R. DAKYNS, R. H. TIDDEMAN, J. C. WARD, W. GUNN, and C. E. DE RANCE.—The Geology of the Burnley Coalfield and the Country round Clitheroe, Blackburn, Preston, Chorley, Haslingden and Tod-

- morden. (Explanation of Quarter Sheets, 88 N.W., 89 N.E., 89 N.W., and 92 S.W.). *Geological Survey Memoir*, pp. 225. 8vo. London.
- 28 JEFFREYS, J. G.—Note on the so-called Crag of Bridlington. *Rep. Brit. Assoc. for 1874*, Sections, pp. 83-87.
- 29 JONES, T. R., and J. W. KIRKBY.—A Monograph of the British Fossil Bivalved Entomostraca from the Carboniferous Formations. Pt. 1, The Cypridinadæ and their allies. [Yorkshire, pp. 38, 50, 51, 54]. Pp. 1-56; plates i.-v. *Monogr. Pal. Soc.*, vol. xxviii., for the year 1874.
- 30 JONES, T. R., and W. K. PARKER.—List of some English Jurassic Foraminifera. [Speeton]. *Geol. Mag.*, dec. ii., vol. ii., pp. 308-311.
- 31 JUDD, J. W.—The Geology of Rutland and Parts of Lincoln, Leicester, Northampton, Huntingdon, and Cambridge, included in Sheet 64 of the one-inch Map of the Geological Survey; with an Introductory Essay on the Classification and Correlation of the Midland District of England. Appendix, with Tables of Fossils by R. ETHERIDGE. Pp. xv. + 320. *Geological Survey Memoir*, 8vo. London.
- 32 KEER, JAMES.—On Lead Mining in the District of Stansfield, Holmes Chapel, Rossendale, and Great Hambledon, North-west Yorkshire and North-east Lancashire. *Trans. Manchester Geol. Soc.*, vol. xiii., p. 344-360.
- 33 KIRKBY, J. W.—[See T. R. Jones].
- 34 LEBOUR, G. A.—On the Limits of the Yoredale Series in the North of England. *Geol. Mag.*, dec. ii., vol. ii., pp. 539-544; *Rep. Brit. Assoc. for 1875*, Sections, pp. 74, 75.
- 35 LYCETT, J.—A Monograph of the British Fossil Trigonïæ. No. 2. [Yorkshire, pp. 53, 58, 63, 65, 66, 67, 68, 70, 72, 80, 84]. Pp. 53-92; plates x.-xix. *Monogr. Pal. Soc.*, vol. xxviii., for the year 1874.
- 36 ——— A Monograph of the British Fossil Trigonïæ. No. 3. [*Trigonia lingonensis* from Cleveland, pp. 98, 99]. Pp. 93-148; plates xx.-xxvii. *Monogr. Pal. Soc.*, vol. xxix. for the year 1875.
- 37 LYELL, C.—[See 1830].
- 38 MEADE, R.—The Iron Industries of the West Riding of Yorkshire. [History and Analyses]. *Mining Journ.*, vol. xlv., p. 343.

- 39 MORTIMER, R.—An Account of a Well-section in the Chalk at the north end of Driffield, East Yorkshire. *Quart. Journ. Geol. Soc.*, vol. xxxi., pp. 111, 112.
- 40 PANKHURST [E. A.].—The Ores of Iron. 22nd Ann. *Rep. Brighton Nat. Hist. Soc.*, pp. 147-152.
- 41 PARKER, W. K.—[See T. R. Jones].
- 42 PHILLIPS, J.—Illustrations of the Geology of Yorkshire; or, a Description of the Strata and Organic Remains. [Bibliography by W. WHITAKER]. Ed. 3, by R. ETHERIDGE. 4to. *London*.
- 43 READE, T. M.—Speculation on the probable distribution of land and sea during the deposition of the marine boulder clay and sands. *Proc. Liverpool Geol. Soc.*, vol. iii., pt. 1, pp. 35-52.
- 44 ROBERTSON, D.—[See G. S. Brady].
- 45 RUSSELL, R.—The Geology of the North Yorkshire Coal-field. *Coll. Guard.*, vol. xxx., pp. 563, 564. The same as 1873 and 1874, under different titles.
- 46 SMYTH, W. W.—The Ores of Iron considered in their Geological Relations. *Coll. Guard.*, vol. xxix., p. 737; *Mining Journ.*, vol. xlv., p. 550. Lecture to the Iron and Steel Institute, May 15th, 1875.
- 47 SPON, E.—Water Supply. The present practice of Sinking and Boring Wells; with Geological Considerations and Examples of wells executed. [Middlesbrough, pp. 163-165]. 8vo. *London*.
- 48 SORBY, H. C.—On the Remains of a Fossil Forest in the Coal Measures at Wadsley, near Sheffield. *Quart. Journ. Geol. Soc.*, vol. xxxi., pp. 458-460.
- 49 TIDDEMAN, R. H.—Second Report of the Committee appointed for the purpose of assisting in the Exploration of the Settle Caves (Victoria Cave). *Rep. Brit. Assoc.* for 1874, pp. 133-138. Reprinted. 8vo. *Lancaster*.
- 50 ——— The Work and Problems of the Victoria Cave Exploration. *Proc. Yorks. Geol. Soc.*, vol. vi., pt. 2, pp. pp. 77-92.
- 51 ——— [See E. Hull].
- 52 WALKER, J. F.—Oolitic Brachiopoda. [Yorkshire Coast]. *Geol. Mag.*, dec. ii., vol. ii., p. 572.
- 53 WARD, J. C.—[See E. Hull].

54 WEBER, H.—[See J. Braun].

55 WHITAKER, W.—[See J. Phillips].

1876.

- 1 ANON.—Winning of the Silkstone Coal at Hoyland Nether. *Coll. Guard.*, vol. xxxi., pp. 388, 389.
- 2 ——— Iron Mines of Cleveland. South Cleveland and the Iron Trade. Duration of the Cleveland Iron Fields. [Historical, statistical, and in part geological]. *Iron*, vol. vii., p. 678; vol. viii., pp. 553, 614.
- 3 ——— Reports of the Inspectors of Mines. *Parliamentary Reports*. Fol. London.
- 4 ——— [G. PHILIP BEVAN]. Coal Mining. [Small map of England showing mineral areas]. *British Manufacturing Industries*. 8vo. London.
- 5 ——— W. B. D.—Caves. [Yorkshire caves noticed]. *Ency. Brit.*, ed. 9, vol. v., pp. 265-271.
- 6 ——— W. D. R.—[Excursion to Coxley Valley. Mr. Tindall described the geology of the Horbury district]. *Naturalist*, new. ser., vol. i., pp. 175, 176.
- 7 ——— [H. WOODWARD]. — Glacial Deposits at York. [Photographs by J. E. Clark]. *Geol. Mag.*, dec. ii., vol. iii., p. 384.
- 8 AITKEN, J.—Observations on the Unequal Distribution of Drift on opposite sides of the Pennine Chain, in the country about the source of the River Calder, with suggestions as to the Causes which led to that result, together with some Notices on the High-Level Drift in the upper part of the Valley of the River Irwell. [Valley of the Calder]. *Quart. Journ. Geol. Soc.*, vol. xxxii., pp. 184-190; *Trans. Manchester Geol. Soc.*, vol. xiv., pp. 50-71.
- 9 BARROIS, C.—Recherches sur le Terrain Crétacé supérieur de l'Angleterre et de l'Irlande. *Mem. Soc. Geol. Nord.*, t. i., mem. i., pp. 232. Also 4to. Lille. Summary in *Ann. Soc. Geol. Nord.*, t. iii., pp. 189-205.
- 10 ——— [See E. Westlake, 1888].
- 11 BEVAN, G. PHILIP.—[See Anon.].
- 12 ——— [See E. Hull].
- 13 ——— [See W. W. Smyth].
- 14 BEVAN, J. P.—[See A. Galletly].



- 15 BIRD, C.—On the Red Beds at the base of the Carboniferous Limestone in the N.W. of England [Sedbergh]. *Proc. Yorks. Geol. Soc.*, vol. vi., pt. 2, pp. 57-66.
- 16 BLAKE, J. F.—[See R. Tate].
- 17 BRADY, H. B.—A Monograph of Carboniferous and Permian Foraminifera (The Genus *Fusulina* excepted). [Yorkshire, pp. 32, 50, 67, 81, 99, 104, 153, 159]. Pp. 1-166; plates i.-xii. *Monogr. Pal. Soc.*, vol. xxx. for the year 1876.
- 18 BRODIE, P. B.—On the further Extension of the Rhætic and Penarth Beds in Warwickshire, Leicestershire, Nottinghamshire, Yorkshire, and Cumberland; and on the Occurrence of some supposed Remains of a new Labyrinthodont and a new Radiate therein. *Rep. Brit. Assoc. for 1875*, Sections, p. 64.
- 19 BUTTERWORTH, J.—Rambles after Fossil Plants. [Macropores in 'coal balls' at Halifax]. *Sci. Goss.*, No. 143, Nov. 1st, 1876, pp. 243, 244.
- 20 ——— Coal Plants (Ovenden Naturalists' Society). *Naturalist* ser. 2, vol. i., No. 10, pp. 151-153.
- 21 CLARK, J. E.—Glacial Deposits at York. *Geol. Mag.*, Dec. 2nd, vol. iii., p. 384.
- 22 ——— [See Anon.].
- 23 CLOUGH, C. T.—The Section at the High Force, Teesdale. *Quart. Journ. Geol. Soc.*, vol. xxxii., pp. 466-471.
- 24 CROSSKEY, H. W.—Third Report . . . on Erratic Blocks. [Whinstone at Bradford, p. 91]. *Rep. Brit. Assoc. for 1875*, pp. 82-91.
- 25 DAVIDSON, T.—A Monograph of the British Fossil Brachipoda. Vol. iv., pt. 2, No. 1. Supplement to the Jurassic and Triassic Species. [Yorkshire, pp. 76, 78, 79, 80, 81, 83, 87, 98, 99, 100, 128, 134, 139, 141]. Pp. 73-144; plates ix.-xvi. *Monogr. Pal. Soc.*, vol. xxx., for the year 1876.
- 26 DAVIS, J. W.—Erratic Boulders in the Valley of the Calder. *Proc. Yorks. Geol. Soc.*, vol. vi., pt. 2, pp. 93-100.
- 27 ——— On a Bone-bed in the Lower Coal-measures, with an Enumeration of the Fish-remains of which it is principally composed. [Bradford]. *Quart. Journ. Geol. Soc.*, vol. xxxii., pp. 332-340.

- 28 D[AWKINS], W. B.—[See Anon.].
- 29 DE RANCE, C. E.—First Report of the Committee . . .  
appointed for the purpose of investigating the Circulation  
of the Underground Waters in the Jurassic, New Red  
Sandstone, and Permian Formations of England, and  
the Quality and Quantity of the Water supplied to Towns  
and Districts from these formations. [Average thickness  
of Permian and Trias; wells at Selby, York, Goole,  
Saltmarshe, Middlesbrough, pp. 126-128]. *Rep. Brit.  
Assoc. for 1875*, pp. 114-141.
- 30 GALLETLY, A.—Coal. [Yorkshire, pp. 69, 94]. *British  
Manufacturing Industries*, pp. 51-96; edited by J. P.  
Bevan. 8vo. *London*.
- 31 GREEN, A. H.—On the Variation in Character and Thick-  
ness of the Millstone Grit of North Derbyshire and the  
adjoining parts of Yorkshire, and on the probable manner  
in which these changes have been produced. *Brit. Assn.  
Rep. for 1875*, Sections, p. 65 (Abstract); in full, in *Proc.  
Geol. Soc. W.R. Yorks.*, n. ser., pt. 2, pp. 108-112.
- 32 ——— On the Geology of the Central Portion of the Yorkshire  
Coal-field lying between Pontefract and Bolton-on-  
Dearne. *Proc. Yorks. Geol. Soc.*, vol. vi., pt. 2, pp. 108-  
112.
- 33 ——— Notes on the Yorkshire Coal Field. *Journ. Iron  
and Steel Inst.*, pp. 305-317.
- 34 ——— Geology for Students and General Readers. Pt. 1,  
Physical Geology. 8vo. *London*. Ed. 2, 1877. Ed. 3, 1882.
- 35 HOBKIRK, C. P.—The Alleged Submerged Forest near  
Holmfirth; with remarks by J. Tindall. *Naturalist*,  
n. ser., vol. i., pp. 138-141.
- 36 HUDLESTON, W. H.—The Yorkshire Oolites. Pt. 2, The  
Middle Oolites. Introduction and Section I. *Proc.  
Geol. Assoc.*, vol. iv., No. 6, pp. 353-410.
- 37 HUNTER, E.—[See H. F. Parsons].
- 38 HUGHES, T. MCK.—On the Evidence for Preglacial Man.  
*Proc. Cambridge Phil. Soc.*, vol. iii., pt. 1, pp. 16, 17.
- 39 HULL, E.—Quarries and Building Stones. [Yorkshire,  
pp. 141-143, 145, 148, 151, 154]. *British Manufacturing  
Industries*, pp. 132-156; edited by G. P. Bevan. 8vo.  
*London*.

- 40 HUNT, R.—The Mineral Statistics of the United Kingdom of Great Britain and Ireland for the year 1875. Pp. xv.+282. 8vo. *London*.
- 41 JONES, T. R.—The Antiquity of Man, illustrated by the Contents of Caves and the Relics of the Cave-folk. [Western Yorkshire]. *Geol. Mag.*, dec. ii., vol. iii., 269-272.
- 42 KUHLOW, W.—England und seine Mineralproduktion (Steinkohle, Eisen). *Berg.-hutt. Zeit.*
- 43 MARR, J. E.—Note on the Occurrence of Phosphatised Carbonate of Lime at Cave Ha [near Giggleswick], Yorkshire. *Geol. Mag.*, dec. ii., vol. iii., pp. 268, 269.
- 44 MILLER, H.—Northumberland Escarpments and Yorkshire Terraces. *Geol. Mag.*, dec. ii., vol. iii., pp. 23-33.
- 45 ——— Glacial Origin of Lake-Basins. [Semerwater]. *Ibid.*, pp. 286, 287.
- 46 MILLER, R.—On Dislocations in the Thill, with the Presence, Amount, and Tension of Gas in the Silkstone Seam of Strafford Main Colliery. [Section of strata]. *Trans. N. Eng. Inst. Eng.*, vol. xxv., pp. 23-27.
- 47 MORTIMER, R.—The Distribution of Flint in the Chalk of Yorkshire. *Quart. Journ. Geol. Soc.*, vol. xxxii., Proceedings, p. 131; *Rep. Brit. Assoc. for 1875*, Sections, p. 78.
- 48 PARSONS, H. F.—The Maritime Plants and Tidal Rivers of the West Riding. [Analysis of Warp, by E. HUNTER, p. 119]. *Naturalist*, n. ser., vol. i., pp. 113-120.
- 49 PICKWELL, R.—Geological Changes along our Eastern Shore. [Silting up of the estuary of the Humber]. Epitome of a letter in the *Eastern Morning News, Land and Water*, Sept. 30th, 1876, vol. xxii., p. 228.
- 50 PLANT [J.].—A Submerged Forest near Holmfirth. *Trans. Manchester Geol. Soc.*, vol. xiv., pp. 71-78.
- 51 R[OE]BUCK, W. D.—[See Anon.].
- 52 RUSSELL, R.—Lithological Description of the Measures occurring in the Northern Portion of the Yorkshire Coal-field. [Read at a joint Meeting with the *N. Eng. Inst. Eng.*, at Leeds, Oct. 1875]. *Trans. Midl. Inst. Eng.*, vol. iv., pp. 195-200, Discussion, pp. 231-240. The same as 1873, 1874, and 1875, under different titles.

- 53 SMYTH, W. W.—Metallic Mining and Collieries. [Yorkshire, pp. 9, 11]. *British Manufacturing Industries*, edited by G. P. Bevan. Pp. 50. 8vo. London.
  - 54 SPENCER, J.—Geology of the Halifax Hard Bed Coal. [Leeds to Sheffield]. *Naturalist*, n. ser., vol. i., Nos. 11, 12, pp. 163, 164, 182-184; vol. ii., pp. 2-4, 1877.
  - 55 TATE, R., and J. F. BLAKE.—The Yorkshire Lias. Pp. ix. +475+xii. Geological Map (scale  $\frac{1}{2}$  inch to a mile). 8vo. London.
  - 56 TATE, T.—The Glacial Deposits of the Bradford Basin. *Proc. Yorks. Geol. Soc.*, vol. vi., pt. 2, pp. 101-107.
  - 57 THORPE, T. E.—A Contribution to the History of the Old Sulphur Well, Harrogate. *Phil. Mag.*, ser. 5, vol. ii., pp. 50-58; *Journ. Chem. Soc.*, vol. i. (xxxi.), pp. 181, 182 (1877).
  - 58 TIDDEMAN, R. H.—Third Report of the Committee appointed for the purpose of assisting in the Exploration of the Settle Caves (Victoria Cave). *Rep. Brit. Assoc.* for 1875, pp. 166-175.
  - 59 ——— The Work and Problems of the Victoria Cave Exploration. *Proc. Yorks. Geol. Soc.*, vol. vi., pt. 2, pp. 77-93.
  - 60 ——— The Age of Palæolithic Man. *Nature*, vol. xiv., pp. 505, 506.
  - 61 TINDALL, J.—[See C. P. Hobkirk].
  - 62 VINE, G. R.—On the Discovery of Macrospores in Carboniferous Sandstone. [Wincobank, near Sheffield]. *Sci. Goss.*, No. 143, pp. 247, 248.
  - 63 WILSON, E.—On the Permians of the North-East of England (at their southern margin), and their Relations to the under- and overlying Formations. *Quart. Journ. Geol. Soc.*, vol. xxxii., pp. 533-537.
  - 64 WOODWARD, H.—[See Anon.].
  - 65 WOODWARD, H. B.—The Geology of England and Wales. Pp. xx.+476. Geological Map. 8vo. London. Ed. 2, 1887.
- 1877.
- 1 ANON.—Sea-spoil. [Waste of land in Yorkshire noticed]. *Chambers' Journ.*, No. 720, Oct. 13th, pp. 648-650.
  - 2 ——— A Week's Holiday. [Notes on the Geology of the Settle District]. *Nat. Hist. Journ.*, vol. i., No. 5, pp. 75-97.

- 3 ANON.—A New Coal-field. [Monckton Main, near Barnsley]. *Coll. Guard.*, vol. xxxiv., p. 738.
- 4 — Notes on the Iron and Steel Industries of the United Kingdom in 1876-7. [Cleveland, pp. 475-481, mostly statistic]. *Journ. Iron and Steel Inst.* for 1877, No. 2, pp. 472-543.
- 5 — Reports of the Inspectors of Mines. *Parliamentary Reports*. Fol. London.
- 6 — Report of the Committee appointed to Investigate the Cause of the Outburst of Gas in the Barnsley Coal at the New Oaks Colliery, on the 30th August, 1876. *Trans. Midl. Inst. Min. Mech. Eng.*, vol. vi., pp. 19-20.
- 7 ADAMS, A. LEITH.—Monograph of the British Fossil Elephants. Pt. 1, Dentition and Osteology of *Elephas antiquus* (Falconer). [Yorkshire, pp. 5, 6, 9, 14, 15, 18]. Pp. 1-68; plates i.-v.; *Monogr. Pal. Soc.*, vol. xxxi., for the year 1877.
- 8 ARMSTRONG, J. L.—Harrogate Handbook and Visitor's Vade Mecum. [Analysis of waters]. Ed. 2. Ed. 5 and 6, no date.
- 9 BARROW, G.—On a new Marine Bed in the Lower Oolites of East Yorkshire. [Eller Beck, near Goathland]. *Geol. Mag.*, dec. ii., vol. iv., pp. 552-555.
- 10 BEVAN, G. P.—Tourist's Guide to the West Riding of Yorkshire, containing full information concerning all its principal places of resort and interest. [Geology, pp. 3, 4]. Pp. viii., 126. 8vo. London. Ed. 2, 8vo. 1880. Ed. 4. 8vo. 1884. Ed. 5. 8vo. 1889. Ed. 6. 8vo. 1894.
- 11 BLAKE, J. F., and W. H. HUDLESTON.—The Corallian Rocks of England. *Quart. Journ. Geol. Soc.*, vol. xxxiii., pp. 260-405.
- 12 BROOKE, E.—Old River Gravels in the Valley of the Colne. *Naturalist*, n. ser., vol. ii., pp. 184, 185.
- 13 CARTER, R.—Chairman's Address, with Observations on the Mineral Aspects of the West-Riding Coalfield. *Proc. Yorks. Geol. Soc.*, vol. vi., pt. 3, pp. 113-122.
- 14 CURRY, J.—Is there a Base to the Carboniferous Rocks in Teesdale. *Geol. Mag.*, dec. ii., vol. iv., pp. 138, 139.

- 15 DAKYNS, J. R.—On Silurian Erratics in Wharfedale.  
*Proc. Yorks. Geol. Soc.*, vol. vi., pt. 3, pp. 159-163.
- 16 ——— Is there a Base to the Carboniferous Rocks in Teesdale? A question for Silurian Geologists. *Geol. Mag.*, dec. ii., vol. iv., pp. 58, 59, 140.
- 17 ——— Exploration of Victoria Cave, Settle, Yorkshire.  
*Ibid.*, p. 285.
- 18 ——— On Professor Hull's Carboniferous Classification.  
*Ibid.*, pp. 312-314.
- 19 ——— A Sketch of the Geology of Keighley, Skipton, and Grassington. *Ibid.*, pp. 346-350. Under different title in *Rep. Brit. Assoc.* for 1873, Sections, pp. 78, 79.
- 20 ——— The Antiquity of Man. [Victoria Cave]. *Ibid.*, pp. 439-441.
- 21 ——— The Supposed Glacial Origin of the Carboniferous Terraces. *Ibid.*, pp. 17, 18.
- 22 ——— [See E. Hull].
- 23 DAVIES, D. C.—On the Relation of the Upper Carboniferous Strata of Shropshire and Denbighshire to Beds usually described as Permian. [Yorkshire compared]. *Quart. Journ. Geol. Soc.*, vol. xxxiii., pp. 10-28.
- 24 DAVIS, J. W.—On a Stratum of Coal containing Fish Remains in the Lower Coal Measures. *Proc. Yorks. Geol. Soc.*, vol. vi., pt. 3, pp. 127-137.
- 25 ——— The Stems and Roots of Fossil Trees in the Lower Coal Measures at Wadsley, near Sheffield. *Ibid.*, p. 179.
- 26 DAWKINS, W. B.—On the Mammal Fauna of the Caves of Cresswell Crags. [Victoria Cave, p. 609]. *Quart. Journ. Geol. Soc.*, vol. xxxiii., pp. 589-611.
- 27 ——— On the Evidence afforded by the Caves of Great Britain as to the Antiquity of Man. [Victoria Cave, p. 159]. *Journ. Anthropol. Inst.*, vol. vii., pp. 151-162.
- 28 DE RANCE, C. E.—Second Report . . . on the Circulation of Underground Waters, etc. [Middlesbrough, York, Boroughbridge, pp. 106, 107]. *Rep. Brit. Assoc.* for 1876, pp. 95-109.
- 29 GEIKIE, J.—The Great Ice Age. Ed. 2. [See 1874].
- 30 GREEN, A. H.—On a Section of Boulder Clay near Barnsley.  
*Proc. Yorks. Geol. Soc.*, vol. vi., pt. 3, pp. 122-127.

- 31 GREEN, A. H.—The Silkstone Seam of Coal at Worsborough.  
*Coll. Guard.*, vol. xxxiii., p. 48 ; from *The Times*.
- 32 ——— [See 1876].
- 33 GREENWELL, WILLIAM.—British Barrows: A record of the examination of sepulchral mounds in various parts of England, together with description of figures of skulls . . . by George Rolleston. *Oxford*. Pp. xii.+763.
- 34 GUNN, W.—Is there a Base to the Carboniferous Rocks in Teesdale? *Geol. Mag.*, dec. ii., vol. iv., pp. 139, 140.
- 35 HARRISON, W. J.—Geology of the West Riding of Yorkshire. *Kelly's Post Office Directory* for 1878. 4to. *London*.
- 36 HOLGATE, B.—The Minerals of the Yorkshire Coal-field as applied to the Modern Manufacture of Iron. *Proc. Yorks. Geol. Soc.*, vol. vi., pt. 3, pp. 137-148.
- 37 HUDLESTON, W. H.—[See J. F. Blake].
- 38 — . — and J. F. WALKER.—On the Distribution of the Brachiopoda in the Oolitic Strata of Yorkshire. *Ann. Rep. Yorks. Phil. Soc.* for 1876, pp. 7-12.
- 39 HULL, E.—On the Upper Limit of the essentially Marine Beds of the Carboniferous Group of the British Isles and adjoining Continental Districts, with Suggestions for a fresh Classification of the Carboniferous Series. [Yorkshire, p. 627]. *Quart. Journ. Geol. Soc.*, vol. xxxiii., pp. 613-651 ; *Journ. Roy. Soc., Ireland*, ser. 2, vol. ix., pp. 224, 225 ; *Rep. Brit. Assoc.* for 1876, Sections, pp. 90, 91.
- 40 ——— Premature Conclusions. [Reply to Mr. Dakyns]. *Geol. Mag.*, dec. ii., vol. iv., pp. 378-380.
- 41 ——— On a Deep Boring for Coal at Searle, Lincolnshire ; and its Bearing on the Question of the Easterly Limit of the Yorkshire Coal Measures beneath the Newer Formations. *Proc. Inst. Civ. Eng.*, vol. xlix., pp. 160-168, Discussion, pp. 169-174. Map of strata from Nottingham to Leeds. *Rep. Brit. Assoc.* for 1876, Sections, pp. 91, 92 ; *London Iron Trades Exchange*, vol. xxi., p. 136.
- 42 KUHLOW, W.—Das Kohlenfeld des südlichen Yorkshire. *Berg-hüttl. Zeit.*
- 43 LEBOUR, G. A.—[See W. Topley].

- 44 LYCETT, J.—A monograph of the British Fossil Trigonizæ. No. 4. [Yorkshire, pp. 150, 154, 156, 170, 172, 176, 195, 199, 204]. Pp. 149-204; plates xxviii.-xl. *Monogr. Pal. Soc.*, vol. xxxi., for the year 1877.
- 45 MANSON, D.—Sulphur Waters. Ed. 2. [See 1869].
- 46 MILLER, R.—[See J. Wilson].
- 47 MORRIS, F. O.—Sea *versus* Land on the East Coast of Yorkshire. [Flamborough Head to Spurn Point]. *Leisure Hour*, No. 1344, pp. 620-623.
- 48 RAMSAY, A. C.—Geological Map of England and Wales. Scale about 11 miles to an inch. Ed. 4. *London*.
- 49 REED, W.—An Artesian Well at Masham in the North Riding. *Ann. Rep. Yorks. Phil. Soc.* for 1876, pp. 29-35.
- 50 REID, H.—The Science and Art of the Manufacture of Portland Cement, with observations on some of its constructive applications. [Analysis of Chalk, p. 49; Analysis of Limestone, from Huddlestone, p. 73]. 8vo. *London*.
- 51 ROLLESTON, GEORGE.—[See William Greenwell].
- 52 ROWLEY, W.—Deep Mining and Recent Achievements of Engineering in connection therewith. [Sharlston and many foreign borings]. *Proc. Yorks. Geol. Soc.*, vol. vi., pt. 3, pp. 163-178.
- 53 RUSSELL, R.—Address to the Whitehaven Scientific Association. [Refers to Victoria Cave]. *Whitehaven News*, Oct. 11th.
- 54 ——— The Flockton Coals and the Physical Conditions that led to their Formation. *Trans. Midl. Inst. Eng.*, vol. v., pp. 48-59, discussion, pp. 127-131.
- 55 SEWELL, E.—Notes on the Drifts and Boulders of the Upper Part of the Valley of the Wharfe, Yorkshire. *Rep. Brit. Assoc.* for 1876, Sections, pp. 95, 96.
- 56 SPENCER, J.—Geology of the Halifax Hard Bed Coal. [See 1876].
- 57 STEAD, J. E.—Phosphorus in Cleveland Ironstone and in Iron, Part 1. *Proc. Cleveland Inst. Engineers*, pp. 132-135.
- 58 TAYLOR, J. E.—Our Common British Fossils, and where to find them. [Carboniferous of Yorkshire]. *Sci. Goss.*, vol. xiii., pp. 251-255.



- 59 TIDDEMAN, R. H.—Fourth Report . . . . Exploration of the Settle Caves. [Victoria Cave]. *Rep. Brit. Assoc.* for 1876, pp. 115-118.
- 60 — On the Age of the Hyæna-Bed at the Victoria Cave, Settle, and its bearing on the Antiquity of Man. *Journ. Anthropol. Inst.*, vol. vii., pp. 165-173, Discussion, pp. 174-185.
- 61 TOPLEY, W., and G. A. LEBOUR.—On the Intrusive Character of the Whin Sill of Northumberland. [Teesdale]. *Quart. Journ. Geol. Soc.*, vol. xxxiii., pp. 406-422.
- 62 VINE, G. R.—Chapters on Carboniferous Polyzoa. [Many Yorkshire]. *Sci. Goss.*, vol. xiii., pp. 108-110, 152-156, 220-222, 271-274.
- 63 WALKER, J. F.—[See W. H. Hudleston].
- 64 WATTS, W. M.—On the Physical Properties of Ice in connection with the Glacial Period. [Mentions Silurian erratics at the sources of the Ribble]. *Proc. Yorks. Geol. Soc.*, vol. vi., pt. 3, pp. 149-159.
- 65 WILSON, J., and R. MILLER.—On a sudden and heavy discharge of Fire-damp from the floor at the New Oaks Colliery, Barnsley. [Depth of Coal Seams]. *Trans. Midl. Inst. Eng.*, vol. v., pp. 24-28, Discussion, pp. 29-37, 39-47.
- 66 WOOD, S. V., Jun.—American 'Surface Geology' and its Relation to British. With some Remarks on the Glacial Conditions in Britain, especially in Reference to the 'Great Ice Age' of Mr. James Geikie. *Geol. Mag.*, dec. ii., vol. iv., pp. 481-496, 536-551; vol. v., pp. 13-29 (1878).
- 67 WOODWARD, H.—A Catalogue of British Fossil Crustacea. with their synonyms and the range in time of each genus and order. Pp. xii.+155. 8vo. *London*.

1878.

- 1 ANON. [J. S. JEANS?].—Notes on the Iron and Steel Industries of the United Kingdom in 1878. [Cleveland and Hemsworth]. *Journ. Iron and Steel Inst.*, pp. 537-575.
- 2 — Winning of Coal. [Barnsley Bed] at Houghton Main Colliery, near Barnsley. *Coll. Guard.*, vol. xxxv., p. 306.

- 3 ANON.—New Coalfields in Yorkshire. [Hemsworth, near Barnsley]. (*Sheffield Daily Telegraph*). *Coll. Guard*, vol. xxxvi. p. 226.
- 4 — Reports of the Inspectors of Mines. *Parliamentary Reports*. Fol. *London*.
- 5 ANSTED, D. T.—Water and Water-Supply, chiefly in reference to the British Islands. [Drainage areas, etc.]. Pp. xii.+580. 8vo. *London*.
- 6 BEDWELL, F. A.—Notes on the Bridlington Crag and Boulder Clay. *Geol. Soc.*, dec. ii., vol. v., pp. 517-521.
- 7 BEST, E.—[See A. C. Ramsay].
- 8 BEVAN, G. P.—Tourist's Guide to the East and North Ridings of Yorkshire, containing full information concerning all its favourite places of resort both on the Coast and Inland. [Geology, p. 4]. Pp. 140. 8vo. *London*. Ed. 3, 1884. Ed. 4, 1887. Ed. 5, 1891.
- 9 BLAKE, J. F.—On the Chalk of Yorkshire. *Proc. Geol. Assoc.*, vol. v., No. 5, pp. 232-270.
- 10 BLAXALL, —.—Report on an Epidemic of Diphtheria in the Rural Sanitary District of Sculcoates in the County of York, and upon the sanitary condition of the infected Localities. *Local Government Board Report*. Fol. *London*.
- 11 CAMERON, A. G.—Notes on Some Peat Deposits at Kildale and West Hartlepool. *Geol. Mag.*, dec. ii., vol. v., pp. 351-352.
- 12 CLARKE, J. A.—Practical Agriculture. [Yorkshire soils, etc., pp. 614-617] *Journ. Roy. Agric. Soc.*, ser. 2, vol. xiv., pp. 447-642.
- 13 CLOUGH, C. T.—[See W. Gunn].
- 14 CUDWORTH, W. J.—Submarine Forests [at Redcar]. *Nat. Hist. Journ.*, vol. ii., pp. 28, 29.
- 15 DAKYNS, J. R.—On a base to the Carboniferous Rocks in Teesdale. [Cronkley Fell]. *Proc. Yorks. Geol. Soc.*, vol. vi., pt. 4, pp. 239-242.
- 16 — [See A. H. Green].
- 17 DALTON, W. H.—[See A. H. Green].
- 18 DAVIDSON, T.—A Monograph of the British Fossil Brachipoda. Vol. iv., pt 2, No. 2, Supplement to the Jurassic and Triassic Species. [Many Yorkshire Species]. Pp.

- 145-241; plates xvii.-xxix. *Monogr. Pal. Soc.*, vol. xxxii., for the year 1878.
- 19 DAVIS, J. W.—Unconformability of the Permian Limestone to the Red Rocks west of its escarpment in Central Yorkshire. *Proc. Yorks. Geol. Soc.*, vol. vi., pt. 4, pp. 280-308.
- 20 — Junction of the Silurian Rocks with the overlying Mountain Limestone, at Moughton Fell, in Ribblesdale. *Ibid.*, pp. 309, 310.
- 21 — The Physical Forces which have caused the present configuration of the Valley of the Calder in Yorkshire. *Geol. Mag.*, dec. ii., vol. v., pp. 500-508. [See J. R. Dakyns, 1879].
- 22 — Ichthyography of the Northern Part of the West Riding Coal-field. *Trans. Midl. Inst. Eng.*, vol. vi., pp. 127-145, 159-167.
- 23 — and F. A. LEES.—West Yorkshire: An Account of its Geology, Physical Geography, Climatology and Botany. Pt. 1, Geology, by J. W. Davis. Pt. 2, Physical Geography and Botanical Topography, by J. W. Davis and F. Arnold Lees. [Bibliography, pp. xiii.-xl.]. 8vo. *London*.
- 24 DAWKINS, W. B.—The British Pleistocene Mammalia. Pt. A. A Preliminary Treatise on the Relation of the Pleistocene Mammalia to those now living in Europe. [Yorkshire, pp. ix., xi., xxi.]. Pp. i.-xxxviii. *Monogr.. Pal. Soc.*, vol. xxxii., for the year 1878.
- 25 DE RANCE, C. E.—On the Palæozoic and Secondary Rocks of England as a source of Water Supply. *Trans. Manchester Geol. Soc.*, vol. xiv., pp. 403-440, plate. Also under different title. 8vo. *Manchester*.
- 26 — Third Report . . . on the Circulation of Underground Waters, etc. [Pontefract, Selby, pp. 61, 72]. *Rep. Brit. Assoc.*, for 1877, pp. 56-81.
- 27 EMBLETON, T. W.—[Notice of Specimens of Vegetable Resin (Middletonite) from Yorkshire Coals]. *Trans. Midl. Inst. Eng.*, vol. vi., p. 154.
- 28 GREEN, A. H.—Explanation of Quarter Sheet, 87 S.W., of the One-inch Geological Survey Map of England, illustrating the geology of the neighbourhood of Barnsley. Pp. 17. *Geological Survey Memoir*. 8vo. *London*.

- 29 GREEN, A. H.—Explanations of Horizontal Sections, Sheet 99 and Sheet 100. *Geological Survey*.
- 30 ——— R. RUSSELL, J. R. DAKYNS, J. C. WARD, C. FOX-STRANGWAYS, W. H. DALTON and T. V. HOLMES.—Geology of the Yorkshire Coalfield. *Memoirs of the Geological Survey*. 8vo. *London*.
- 31 ——— [See T. C. Thorpe].
- 32 GUNN, W., and C. T. CLOUGH.—Discovery of Silurian Beds in Teesdale. [Map of the district]. *Quart. Journ. Geol. Soc.*, vol. xxxiv., pp. 27-34.
- 33 HARRISON, W. J.—Geology of the Counties of England. West Riding of Yorkshire. *Kelly's Post Office Directory*. 8vo. *London*.
- 34 HOLMES, T. V.—[See A. H. Green].
- 35 HUDLESTON, W. H.—The Yorkshire Oolites. Pt. 2, Section 2. The Coralline Oolites, Coral Rag and Supracoralline Beds. *Proc. Geol. Assoc.*, vol. v., No. 8, pp. 407-494.
- 36 HUTCHINSON, T. N.—On certain corroded Limestone Masses in Yorkshire [Ingleborough]. *Rep. Rugby School Nat. Hist. Soc.* for 1877, pp. 29-32.
- 37 JEANS, J. S.—[See Anon.].
- 38 JORDAN, J. B.—[See A. C. Ramsay].
- 39 LAMPLUGH, G. W.—On the occurrence of Marine Shells in the Boulder-clay of Bridlington and elsewhere on the Yorkshire Coast. *Geol. Mag.*, dec. ii., vol. v., pp. 509-517, 573.
- 40 LEBOUR, G. A.—Outline of the Geology of Northumberland and Durham [includes Cleveland]. Ed. 2 in 1886.
- 41 LEES, F. A.—[See J. W. Davis].
- 42 LUBBOCK, J.—Prehistoric Times. Ed. 4. [See 1865].
- 43 MARSHALL, —.—[See T. C. Thorpe].
- 44 MIALL, L. C.—The Geology, Natural History, and Prehistoric Antiquities of Craven in Yorkshire. Pp. 42, map and section. 4to. *Leeds*. Reprinted from the Third Edition of Whitaker's 'History of Craven.'
- 45 MORTIMER, R.—On the Flints of the Chalk of Yorkshire. *Proc. Geol. Assoc.*, vol. v., No. 6, pp. 344-354.
- 46 MORTIMER, R.—[See T. C. Thorpe].
- 47 MORANT, A. W.—[See T. D. Whitaker].

- 48 PARSONS, H. F.—The Alluvial Strata of the Lower Ouse Valley. *Proc. Yorks. Geol. Soc.*, vol. vi., pt. 4, pp. 214-238.
- 49 PICKWELL, R.—The Encroachments of the Sea from Spurn Point to Flambro' Head, and the Works executed to prevent the Loss of Land. *Proc. Inst. Civ. Eng.*, vol. li., pp. 191-212.
- 50 RAMSAY, A. C.—The Physical Geology and Geography of Great Britain: a Manual of British Geology. Ed. 5. 8vo. *London*.
- 51 ——— Geological Map of the British Islands. Scale  $11\frac{1}{2}$  miles to an inch. Geological lines drawn by E. BEST and J. B. JORDAN.
- 52 RÜCKER, A. W.—[See T. C. Thorpe].
- 53 RUSSELL, R.—[See A. H. Green].
- 54 STEAD, J. E.—Phosphorus in Cleveland Ironstone. *Chem. News*, vol. xxxviii., pp. 17-18, 27-31, 39, 42.
- 55 ——— Phosphorus in Iron Ore and in Iron. Part 2. *Proc. Cleveland Inst. Engineers*, pp. 48-61.
- 56 STRANGWAYS, C. FOX.—[See A. H. Green].
- 57 STOCK, T.—A Tour in search of Fossils. [Settle]. *Sci. Goss.*, No. 168, pp. 270-272.
- 58 THORPE, T. C.—The Chemistry of Coal. *Keighley News*, March 9th and 16th (Lectures).
- 59 ——— and A. H. GREEN, L. C. MIALL, A. W. RÜCKER, and —. MARSHALL.—Coal: its History and Uses. [Yorkshire, pp. 39, 231]. Pp. xii.+563. 8vo. *London*.
- 60 TIDDEMAN, R. H.—Fifth Report . . . Exploration of the Settle Caves (Victoria Cave). *Rep. Brit. Assoc. for 1877*, pp. 215-220.
- 61 TUTE, J. S.—Notes on the Glacial Drift near Ripon. *Proc. Yorks. Geol. Soc. for 1877*, vol. vi., pt. 4, pp. 210-214.
- 62 WARD, J. C.—[See A. H. Green].
- 63 WARING, E. J.—*Bibliotheca Therapeutica*; or, Bibliography of Therapeutics, chiefly in reference to Articles of the Materia Medica . . . [List of titles on mineral waters. Vol. ii., 1879, p. 775]. 2 vols. 8vo. *London*.
- 64 WHITAKER, T. D.—The History and Antiquities of the

- Deanery of Craven in the County of York. Edited by A. W. Morant, [The Geology, Natural History, and Pre-historic Antiquities by L. C. Miall, pp. 594-622; Geological Map and Sections]. Ed. 3. 4to. *Leeds* and *London*. [See under 1805].
- 65 WIGNER, G. W.—The Water Supply of Sea-Side Watering-Places. An examination into the Character of the Water Supply at the Watering-Places of England and Wales; being a series of Reports prepared for and published in the 'Sanitary Record' during 1877-78. Pp. iv.+234. 8vo. *London*. Also in shorter form, under the title 'Sea-Side Water, an Examination . . .' Pp. iv.+43. 8vo. *London*.
- 66 WILLIAMSON, W. C.—On the Microscopic Conditions of a Slab from the Mountain Limestone of Bolland. *Proc. Manchester Lit. Phil. Soc.*, vol. xvii., pp. 70-74.
- 67 ——— On the Organization of Fossil Plants of the Coal-Measures. Part 9. [Specimens from Halifax]. *Phil. Trans.*, vol. clxix., pp. 319-364.
- 68 WOOD, S. V., Jnr.—American 'Surface Geology.' [See 1877].
- 69 WOODWARD, H.—A Monograph of the British Fossil Crustacea belonging to the Order Merostomata. [Carboniferous of Settle and Bolland, pp. 249, 253]. Pp. 181-263; plates xxxi.-xxxvi. *Monogr. Pal. Soc.*, vol. xxxii., for the year 1878.
- 70 WRIGHT, T.—Monograph on the British Fossil Echinodermata of the Oolitic Formations. Vol. i., the Echinoidea. Introduction and Index. Pp. i.-iii, 469-481.
- 71 ——— Monograph on the Lias Ammonites of the British Islands. Part 1, The Lias Formation. [Correlation of the Zones of the Lias]. Pp. 1-48; plates i.-viii. *Monogr. Pal. Soc.*, vol. xxxii., for the year 1878.

## 1879.

- 1 ANON.—Reports of the Inspectors of Mines. *Parliamentary Report*. Fol. *London*.
- 2 ——— Thirsk District Water.—Minutes of Evidence taken before the select Committee on Private Bills. [Analysis

- and rate of flow of springs at Kewick and Lunshaw].  
*Parliamentary Paper*. Fol. London.
- 3 ADAMS, A. LEITH.—Monograph on the British Fossil Elephants. Part II. Dentition and Osteology of *Elephas primigenius* (Blumenbach). [Yorkshire, pp. 71, 87, 120]. Pp. 69-146; Plates vi.-xv. *Monogr. Pal. Soc.*, vol. xxxiii. for the year 1879.
  - 4 ATKINSON, J. T.—On the History and Objects of the Society, especially with reference to the History of Selby and the geology of Selby and the District *Proc. Yorkshire Geol. Soc.*, vol. vii., pt. 1, pp. 52-60.
  - 5 BARROIS, C.—Note on the Rev. J. F. Blake's Paper on the Chalk of Yorkshire. *Proc. Geol. Assoc.*, vol. vi., No. 4, pp. 165-169.
  - 6 BLAKE, J. F.—The Geological History of East Yorkshire. *Proc. Yorks. Geol. Soc.* for 1878, vol. vii., pt. 1, pp. 15-29.
  - 7 BONNEY, T. G., and F. T. S. HOUGHTON.—On some Mica-traps from the Kendal and Sedbergh Districts. *Quart. Journ. Geol. Soc.*, vol. xxxv., pp. 165-180.
  - 8 CAMERON, A. G.—Ripon Swallow-holes. *Geol. Mag.*, dec. ii., vol. vi., p. 575.
  - 9 ——— Lecture on Geology. *Cleveland News*, Feb. 15th.
  - 10 CASH, W., and T. HICK.—A Contribution to the Flora of the Lower Coal Measures of the Parish of Halifax, Yorkshire. *Proc. Yorkshire Geol. Soc.*, vol. vii., pt. 1., pp. 73-82.
  - 11 CLARK, J. E.—Askham Bog. *Nat. Hist. Journ.*, vol. iii., pp. 113-115.
  - 12 COLE, E. M.—On the Red Chalk. *Proc. York. Geol. Soc.*, vol. vii., pt. 1., pp. 30-39.
  - 13 DAKYNS, J. R.—On the Southward Flow of Shap Granite Boulders. *Proc. York. Geol. Soc.*, vol. vii., pt. 1., pp. 60-65.
  - 14 ——— The Calder Valley [Letter on Mr. Davis's paper, 1878]. *Geol. Mag.*, dec. ii., vol. vi., pp. 46, 47.
  - 15 ——— The Hitchin Stone [Sutton Moor, near Keighley]. *Ibid.*, p. 96.
  - 16 ——— The Bridlington and Sewerby Gravels. *Ibid.*, pp. 238, 239.
  - 17 ——— Lenticular Hills of Glacial Drift. *Ibid.*, pp. 382, 383.

- 18 DAKYNS, J. R.—The Purple Boulder Clay at Holderness.  
*Geol. Mag.*, dec. ii., vol. vi., p. 528.
- 19 ———, C. FOX-STRANGWAYS, R. RUSSELL, and W. H. DALTON.—Explanation of Quarter-sheet, 92 S.E. of the Geological Map of England and Wales, illustrating the geology of the Country between Bradford and Skipton.  
*Geological Survey Memoir*, pp. 20. 8vo. London.
- 20 DALTON, W. H.—[See J. R. Dakyns].
- 21 DAVIS, J. W.—On the Occurrence of certain Fish Remains in the Coal Measures, and the evidence they afford of Fresh-water Origin. *Proc. Yorks. Geol. Soc.*, vol. vii., pt. 1., pp. 40-52. *Rep. Brit. Assoc. for 1878*, p. 539 (Abstract).
- 22 ——— Goredale Scar. [Descriptive of a photograph]. *Proc. Yorks. Geol. Soc.*, vol. vii., pt. 1, pp. 83, 84.
- 23 ——— On the Source of the Erratic Boulders in the Valley of the River Calder, Yorkshire. *Geol. Mag.*, dec. ii., vol. vi., pp. 313-321. *Proc. Yorks. Geol. Soc.*, vol. vii., pt. ii., pp. 141-154. 1880.
- 24 ——— The Calder Valley [In answer to Mr. Dakyns]. *Geol. Mag.*, dec. ii., vol. vi., p. 191.
- 25 ——— Description of a new Species of Fossil Fish Spine, *Ctenacanthus minor*, from the Lower Coal Measures of Yorkshire. *Ibid.*, p. 531.
- 26 ——— Notes on *Pleuroodus affinis* sp. ined. Agassiz, and Description of three Spines of Cestracionts from the Lower Coal Measures. *Quart. Journ. Geol. Soc.*, vol. xxxv., pp. 181-188.
- 27 ——— On the Discovery of certain Pockets of Chipped Flints beneath the Peat on the Yorkshire Moors, near Halifax. *Rep. Brit. Assoc. for 1879*, p. 395.
- 28 DE RANCE, C. E.—Notes on some Triassic Borings [Middlesbrough]. *Trans. Manchester Geol. Soc.*, vol. xv., pt. 5, pp. 90-112.
- 29 ——— Fourth Report . . . on the Circulation of Underground Waters, etc. [Doncaster, p. 31]. *Rep. Brit. Assoc. for 1878*, pp. 382-419.
- 30 ——— Pervious Rocks of England and Wales. [Yorkshire noted]. *Journ. Soc. Arts.*, vol. xxvii., pp. 811, 812.
- 31 ETHERIDGE, R., Junr.—Notes on the Bivalves contained



- in the Gilbertson Collection, British Museum, and Figured in Phillips' *Geology of Yorkshire*. *Geol. Mag.*, dec. ii., vol. vi., pp. 161-165.
- 32 FOX-STRANGWAYS, C.—[See J. R. Dakyns].
- 33 GEIKIE, A.—Geology. *Encyclopædia Britannica* Ed. 9. Vol. x., pp. 312-375.
- 34 GREEN, A. H., and R. RUSSELL.—Explanation of Quarter Sheet 87 N.W. of the One-inch Geological Map of England and Wales, illustrating the geology of the neighbourhood of Wakefield and Pontefract. *Geological Survey Memoir*. Pp. ii.+14. 8vo. London.
- 35 — Article 'Geology' in the British Association Guide to the Town and District of Sheffield. 8vo. *Sheffield*.
- 36 — The Geology of the Neighbourhood of Rotherham. In J. Guest's *Historical Notices of Rotherham*, pp. 622, 633. Fol. *Worksop*.
- 37 GUEST, J.—Historical Notices of Rotherham. [See A. H. Green].
- 38 GUNN, W.—Glaciation of the West Yorkshire Dales. *Geol. Mag.*, dec. ii., vol. vi., p. 384.
- 39 HICK, T.—[See W. Cash].
- 40 HOLMES, T. V.—The Geology of Sheffield. *Sci. Goss.*, No. 176, pp. 169-172.
- 41 HULL, E.—The Age of the Pennine Chain. *Geol. Mag.*, dec. ii., vol. vi., pp. 573, 574.
- 42 HUNT, R.—Mineral Statistics. [See 1880].
- 43 HUTCHINSON, T. N.—On certain Ice-borne Boulders scattered over the summit of 'Norber,' near Clapham, Yorkshire. *Rep. Rugby School Nat. Hist. Soc.* for 1878, pp. 25, 26.
- 44 JONES, T. R., and J. W. KIRKBY.—Descriptions of the Ostracodous genus *Bairdia* McCoy from the Carboniferous Strata of Great Britain. [*B. curta* from Settle]. *Quart. Journ. Geol. Soc.*, vol. xxxv., pp. 565-580.
- 45 KIRKBY, J. W.—[See T. R. Jones].
- 46 LAMPLUGH, G. W.—On the Occurrence of Freshwater Remains in the Boulder-Clay at Bridlington. *Geol. Mag.*, dec. ii., vol. vi., pp. 393-399.
- 47 LEWIS, A. L.—The 'Devil's Arrows,' Yorkshire. *Journ. Anthropological Inst.*, vol. viii., pp. 180-183.

- 48 LYCETT, J.—A Monograph of the British Fossil Trigonæ.  
[Yorkshire, pp. 206, 213, 219]. Pp. 205-245 ; plate xli.  
*Monogr. Pal. Soc.*, vol. xxxiii., for the year 1879.
- 49 MANSON, D.—Sulphur Waters. Ed. 3. [See 1869].
- 50 MARKHAM, C. R.—The Valley of the Don. *Rep. Brit. Assoc.* for 1879, pp. 425-432 ; *Proc. Roy. Geog. Soc.*, vol. i., pp. 675-680.
- 51 MORTIMER, J. R.—The Chalk Water Supply of Yorkshire.  
*Proc. Inst. Civ. Eng.*, vol. lv., pp. 252-258. [See 1899].
- 52 REID, H.—Treatise on Concrete. Ed. 2. [See 1869].
- 53 RUSSELL, R.—[See J. R. Dakyns].
- 54 ——— [See A. H. Green].
- 55 SHRUBSOLE, G. W.—A Review of the British Carboniferous Fenestellidæ. [Yorkshire species]. *Quart. Journ. Geol. Soc.*, vol. xxxv., pp. 275-284.
- 56 SORBY, H. C.—The Anniversary Address of the President.  
[Structure of Rocks]. *Quart. Journ. Geol. Soc.*, vol. xxxv *Proc.*, pp. 39-95.
- 57 TATE, R.—Class Book of Geology. [See 1872].
- 58 TIDDEMAN, R. H.—Sixth Report on the Exploration of the Settle Caves (Victoria Cave). *Rep. Brit. Assoc.* for 1878, pp. 377-380.
- 59 TUTE, J. S.—On an Orthoceras of the Millstone Grit. *Proc. Yorks. Geol. Soc.* for 1878, vol. vii., pt. 1, p. 82. [See 1873].
- 60 WARING, E. J.—Bibliotheca Therapeutica. Vol. ii. [See 1878].
- 61 WILSON, E.—The Age of the Pennine Chain. *Geol. Mag.*, dec. ii., vol. vi., pp. 500-504 ; *Midl. Nat.*, vol. iii., pp. 1-4 (1880).; *Rep. Brit. Assoc.* for 1879, pp. 343-344.
- 62 VINE, G. R.—The Polyzoa of the Carboniferous Era.  
*Trans. Sheffield Lit. Phil. Soc.*, Pp. 2.
- 63 WRIGHT, T.—Monograph on the Lias Ammonites of the British Islands. Pt. 2, The Lias Formation. [Correlation of the Zones of the Lias cont.]. Pp. 49-164 ; plates ix.-xviii. *Monogr. Pal. Soc.*, vol. xxxiii., for the year 1879.

1880.

- 1 ANON.—The Aldwarke Main Colliery, Rotherham. [Section of shaft]. *The Engineer*, vol. xlix., p. 136.

- 2 ANON.—The County Companion, Diary, Statistical Chronicle, and Magisterial and Official Directory for 1880. [Geological notes]. 8vo. *London*.
- 3 ——— Landslips [and Coast Erosion]. *Nature*, vol. xxii., pp. 505, 506; *Scotsman*, Oct. 18th, 1880.
- 4 ——— The Origin of Sandstones. [Millstone Grit of South Yorkshire]. *The Forester*, vol. iii., pp. 36-42.
- 5 ——— Reports of the Inspectors of Mines. *Parliamentary Report*. Fol. *London*.
- 6 ——— Report of the Committee appointed to investigate the Cause of the Outburst of Gas in the Barnsley Coal at the New Oaks Colliery on the 30th August, 1876. [Section of the Barnsley Coal]. *Trans. Midl. Inst. Eng.*, vol. vi., pp. 19, 20.
- 7 AITKEN, J.—On the Occurrence of a bed of Iron Pyrites in the Millstone Grit in the Walsden Valley, near to the remains of an Ancient Bloomery. [Near Todmorden]. *Trans. Manchester Geol. Soc.*, vol. xv., pt. 8, pp. 185-194.
- 8 ——— On the Discovery of an ancient Iron-mine in Cliviger and some further remarks on the remains of old Bloomeries in the neighbourhood of Todmorden. *Ibid.*, pt. 9, pp. 261-278.
- 9 AVELINE, W. T.—The Geology of Parts of Nottinghamshire, Yorkshire, and Derbyshire. (Explanation of Quarter Sheet, 82 N.E.). *Geological Survey Memoir*. Ed. 2. Pp. 30. 8vo. *London*, Ed. 1, 1861.
- 10 BARROW, G.—On the Cleveland Ironstone. *Proc. Cleveland Inst. Eng.*, Session, 1879-80, pt. 1., pp. 108-112; pl. ii., pp. 180-188.
- 11 BEVAN, G. PHILLIPS.—Tourist's Guide to the West Riding of Yorkshire. Ed. 2. [See 1877].
- 12 BIRD, P. H.—Lancashire Fells and Yorkshire Dales. Cr. 8vo.
- 13 BLAKE, J. F.—On the Portland Rocks of England. *Quart. Journ. Geol. Soc.*, vol. xxxvi., pp. 189-236.
- 14 ——— Geological Episodes. [Yorkshire Oolites, etc.]. *Rep. Brit. Assoc.*, pp. 335-6.
- 15 CAMERON, A. G.—Blowing Wells [in Bunter Sandstone, near Northallerton]. *Geol. Mag.*, dec. ii., vol. vii., pp. 95, 96.

- 16 CASH, W., and T. HICK.—On Fossil Fungi from the Lower Coal-Measures of Halifax. *Proc. Yorks. Geol. Soc.*, vol. vii., pt. 2, 115-121.
- 17 ——— Notes on Traquaria. [Halifax Hard Coal]. *Ibid.*, p. 122.
- 18 CLOUGH, C. T.—The 'Whin Sill' of Teesdale, as an Assimilator of the surrounding Beds. [Cronkley Fell]. *Geol. Mag.*, dec. ii., vol. vii., pp. 433-447.
- 19 COLE, E. M.—On the Origin and Formation of the Wold Dales. *Proc. Yorks. Geol. Soc.*, vol. vii., pt. 2, pp. 128-140.
- 20 COPPERTHWAIT, H.—Earthwork Slips on the Leeds and Wetherby Branch Railway. [Section at Scarcroft Hill, near Thorner]. *Proc. Inst. Civ. Eng.*, vol. lxii., pp. 285-287.
- 21 CROSSKEY, H. W.—Seventh Report . . . Erratic Blocks . . . [East Coast, pp. 139, 140]. *Rep. Brit. Assoc. for 1879*, pp. 135-140.
- 22 DAKYNS, J. R.—Glacial Beds at Bridlington. *Proc. Yorks. Geol. Soc.*, vol. vii., pt. 2, pp. 123-128.
- 23 ——— Shap Granite Boulders on the Yorkshire Coast. *Rep. Brit. Assoc.*, 1879, pp. 139-140.
- 24 DAVIDSON, T.—A Monograph of the British Fossil Brachipoda. Vol. iv., pt. 3, Supplement to the Permian and Carboniferous Species. [Yorkshire, pp. 250, 252, 285]. Pp. 243-315; plates xxx.-xxxvii. *Monogr. Pal. Soc.*, vol. xxxiv., for the year 1880.
- 25 DAVIS, J. W.—On the Fish Fauna of the Yorkshire Coal-field. *Proc. Geol. Assoc.*, vol. vi., No. 8, pp. 359-370.
- 26 ——— Plumpton Rocks. *Ibid.*, pp. 196, 197.
- 27 ——— *Ostracacanthus dilatatus* (gen. et spec. nov.), a Fossil Fish from the Coal-Measures south of Halifax, Yorkshire. *Ibid.*, pp. 191-195; Abstract in *Rep. Brit. Assoc. for 1879*, p. 343.
- 28 ——— On the Fish-Remains found in the Cannel Coal in the Middle Coal-Measures of the West Riding of Yorkshire, with the Description of some new Species. [Pit sections]. *Quart. Journ. Geol. Soc.*, vol. xxxvi., pp. 56-67.
- 29 ——— On the Genus *Pleuracanthus* Agass, including the Genera *Orthacanthus* Agass. and Goldf. *Diplodus* Agass.

- and *Xenacanthus* Beyr. *Quart. Journ. Geol. Soc.*, vol. xxxvi., pp. 321-336.
- 30 DAVIS, J. W.—On the Teleostean Affinities of the Genus *Pleuracanthus*. [Cannel Coal of Bradford and Wakefield]. *Ann. Mag. Nat. Hist.*, ser. 5, vol. v., pp. 349-357.
- 31 — On a new Species of *Gyracanthus*, a Fossil Fish from the Coal-Measures. [*G. denticulatus*, from Tingley, Leeds]. *Ibid.*, vol. vi., pp. 372, 373.
- 32 — On the Discovery of Certain Pockets of Chipped Flints beneath the Peat on the Yorkshire Moors, near Halifax. *Rep. Brit. Assoc.* for 1879, p. 395.
- 33 — Erratics in the Calder Valley. [See 1879].
- 34 — . — and F. A. LEES.—West Yorkshire: an Account of its Geology, Physical Geography, Climatology, and Botany. Pt. 1, Geology; Pt. 2, Physical Geography and Botanical Topography. Ed. 2. 8vo. London.
- 35 DAWKINS, W. B.—Early Man in Britain, and his place in the Tertiary Period. [Yorkshire Caves, p. 187]. Pp. xxiii., 537. 8vo. London.
- 36 — On the Action of Carbonic Acid on Limestone. [Ingleborough]. *Rep. Bri. Assoc.* for 1880, pp. 573, 574; *Geol. Mag.*, dec. ii., vol. vii., pp. 514, 515.
- 37 DE RANCE [C. E.].—Fifth Report of the Committee for investigating the Circulation of Underground Waters. *Rep. Brit. Assoc.*, for 1879, pp. 155-161.
- 38 DUNCAN, P. MARTIN.—Presidential Address to the Geological Section [Carboniferous rocks]. *Ibid.* 1879, pp. 326-332.
- 39 FOX-STRANGWAYS, C.—The Geology of the Oolitic and Cretaceous Rocks south of Scarborough. Explanation of Quarter Sheets, 95 S.W. and 95 S.E. (N.S. 54 and 55). *Memoirs of the Geological Survey*. 8vo. London. Ed. 2, 1894.
- 40 ETHERIDGE, R., Junr.—Notes on the Gasteropoda contained in the Gilbertson Collection, British Museum, and figured in Phillip's 'Geology of Yorkshire.' *Annals and Mag. Nat. Hist.*, ser. 5., vol. v., pp. 473-485; vol. vi., pp. 289-301.

- 41 GASCOIGNE, R.—The Age of the Pennine Chain. *Geol. Mag.*, dec. ii., vol. vii., p. 187.
- 42 HICK, T.—[See W. Cash].
- 43 HUDLESTON, W. H.—Contributions to the Palæontology of the Yorkshire Oolites. *Geol. Mag.*, dec. ii., vol. vii., pp. 241, 289, 391, 481, 529 ; vol. viii., pp. 45, 119 ; vol. ix., pp. 146, 193, 241 ; dec. iii., vol. i., pp. 49, 107, 145, 193, 241, 293. 1880-1884.
- 44 HULL, E.—The Age of the Pennine Chain. *Geol. Mag.*, pp. 185-187.
- 45 HUNT, R.—Mineral Statistics of the United Kingdom of Great Britain and Ireland for the years 1879, 1880, 1881, with Appendices. *Geological Survey Memoir*. 8vo. London.
- 46 KELL, A. R.—On a Section of the Barrow Collieries, Worsboro'. *Proc. Yorks. Geol. Soc.*, vol. vii., pt. 2, pp. 111-115.
- 47 KELL, G. J.—On a Displacement or Wash-out of the Barnsley Bed of Coal, at Thrybergh Hall Colliery. [Section of shaft]. *Trans. Midl. Inst. Eng.*, vol. vii., pp. 17, 18, Discussion, pp. 19, 20, 33-40.
- 48 LAMPLUGH, G. W.—On the Divisions of the Glacial Beds in Filey Bay. *Proc. Yorks. Geol. Soc.*, vol. vii., pt. 2, pp. 167-177.
- 49 LEES, F. A.—[See J. W. Davis].
- 50 LUPTON, A.—Notes on the Midland Coalfield. [Derbyshire and Yorkshire]. *Proc. Yorks. Geol. Soc.*, vol. vii., pt. 2, pp. 187-190.
- 51 MACKINTOSH, D.—On the correlation of the Drift-deposits of the North-west of England, with those of the Midland and Eastern Counties. [Drift near Ripon, p. 185]. *Quart. Journ. Geol. Soc.*, vol. xxxvi., pp. 178-188.
- 52 MIALL, L. C.—The Cave [Raygill Fissure] and its Contents. *Proc. Yorks. Geol. Soc.*, vol. vii., pt. 2, pp. 207, 208.
- 53 MILLER, R.—On the South Yorkshire and Midland Coalfields, with reference to the Barnsley Bed in the Barnsley and Nottinghamshire Districts. [Thicknesses and nature of coal]. *Trans. Midl. Inst. Eng.*, vol. vii., pt. 49, pp. 44-47. Discussion. Pp. 47-59.
- 54 NATHORST, A. G.—Berättelse . . . om en med undus-

- töd af allmänna medel utförd vetenskaplig resa till England. *Öfversigt. K. Vetens. Akad. Förhandlingar.* Bd. xxxvii., No. 5, pp. 23-84.
- 55 NATHORST, A. G.—Några anmärkningar om *Williamsonia*, Carruthers. *Öfv. K. Vet. Akad. Förh.*, No. 9, pp. 33-52.
- 56 PARSONS, H. F.—The Trias of the Southern Part of the Vale of York. *Proc. Yorks. Geol. Soc.*, vol. vii., pt. 2, pp. 154-162.
- 57 RICKETTS, C.—On the Carboniferous Limestone, near Skipton [Draughton], and in North Derbyshire. *Proc. Liverpool Geol. Soc.*, vol. iv., pt. 2, pp. 132-139.
- 58 SEAL, S.—Some Account of the Fossil Plants found at the Darfield Quarries, near Barnsley. *Proc. Yorks. Geol. Soc.*, vol. vii., pt. 2, pp. 162-166.
- 59 SEELEY, H. G.—Note on the Cranial Characters of a large Teleosaur from the Whitby Lias, preserved in the Woodwardian Museum of the University of Cambridge, indicating a new species, *Teleosaurus eucephalus*. *Quart. Journ. Geol. Soc.*, vol. xxxvi., pp. 627-634.
- 60 ——— On the Skull of an Ichthyosaurus from the Lias of Whitby, apparently indicating a new species, *I. zetlandicus* Seeley, preserved in the Museum of the University of Cambridge. *Ibid.*, pp. 635-647.
- 61 SORBY, H. C.—Anniversary Address: On the Structure and Origin of Non-calcareous Stratified Rocks. [Millstone Grit of South Yorkshire, p. 59]. *Quart. Journ. Geol. Soc.*, vol. xxxvi.; *Proc.*, pp. 46-92; *Nature*, vol. xxi., pp. 431, 432.
- 62 STANHOPE, W. S.—Address at Barnsley on the Geology of the Yorkshire Coalfield. *Proc. Yorks. Geol. Soc.*, vol. vii., pt. 2, pp. 202, 203.
- 63 TATE, RALPH.—[See S. P. Woodward].
- 64 TATE, T.—The Source of the River Aire. *Proc. Yorks. Geol. Soc.*, vol. vii., pt. 2, pp. 177-186.
- 65 ——— Note on the Intermittent Spring at Malham. *Ibid.*, pp. 186, 187.
- 66 TEALL, J. J. H.—The Pennine Chain. [Criticism of E. Wilson and E. Hull on the age of the Pennine Chain]. *Geol. Mag.*, dec. ii., vol. vii., pp. 92, 93.
- 67 ——— Reply to Prof. Hull. [Permian, etc.]. *Ibid.*, p. 331.

- 68 VINE, G. R.—On the Carboniferous Polyzoa. *Geol. Mag.*, dec. ii., vol. vii., pp. 501-512.
- 69 WATTS, W.—Geological Strata, and mode of procedure in driving a tunnel at Saddleworth. [*Geology*, p. 361]. *Trans. Manchester Geol. Soc.*, vol. xv., pt. 16, pp. 352-365.
- 70 WILLIAMSON, W. C.—On the Organization of the Fossil Plants of the Coal-Measures. Pt. 10, Including an Examination of the supposed Radiolarians of the Carboniferous Rocks. [Halifax, p. 532]. *Phil. Trans.*, vol. clxxi., pp. 493-539.
- 71 ——— On the Botanical Affinities of the Carboniferous Sigillariæ. *Rep. Brit. Assoc. for 1879*, pp. 346-7.
- 72 WILSON, E.—The Age of the Pennine Chain. [Letter in answer to Prof. Hull]. *Geol. Mag.*, dec. ii., vol. vii., pp. 93-95. Also *The Midland Naturalist*, vol. iii., pp. 1-4; and *Rep. Brit. Assoc. for 1879 and 1880*, pp. 343-4.
- 73 WOOD, S. V.—The Newer Pliocene Period in England. *Quart. Journ. Geol. Soc.*, vol. xxxvi., pp. 457-528.
- 74 WOODWARD, S. P.—Manual of the Mollusca; or, Recent and Fossil Shells. Ed. 4. With an Appendix of Recent and Fossil Conchological Discoveries, by RALPH TATE. 8vo. *London*.
- 75 WRIGHT, T.—Monograph of the British Fossil Echinodermata of the Oolitic Formations. Vol. ii., The Asteroidea and Ophiuroidea. [*Ophiolepis leckenbyi*, from Scarborough, pp. 160, 161; *O. murravii*, from Staithes, pl. xix.]. Pp. i.-iv., 155-203; plates xix.-xxi. *Monogr. Pal. Soc.*, vol. xxxiv., for the year 1880. [See 1863].
- 76 ——— Monograph on the Lias Ammonites of the British Islands. Pt. 3, Classification. Pp. 165-264; plates xix.-xl. *Monogr. Pal. Soc.*, vol. xxxiv., for the year 1880.

1881.

- 1 ANON.—Middlesbrough and the District: being Notes Historical, Industrial and Scientific. [*Geological Map*]. 12mo. *Middlesbrough*.
- 2 ——— [signed A.D.H.L., See William Smith].
- 3 ——— Reports of the Inspectors of Mines. *Parliamentary Report*. Fol. *London*.



- 4 ADAMS, A. L.—Monograph of the British Fossil Elephants. Part III. Osteology of *Elephas primigenius* (Blumenbach) and Dentition and Osteology of *Elephas meridionalis* (Nesti) [*E. primigenius* from Harswell, and map showing distribution]. Pp. 147-265; Plates xxi.-xxviii. *Monogr. Pal. Soc.*, vol. xxxv., for the year 1881.
- 5 ALEXANDER, W.—[See under 1839].
- 6 ALLISON, T.—Notes on the geology of the Cleveland District. *Proc. Yorks. Geol. Soc.*, vol. vii., pt. 3., pp. 285-288.
- 7 BEVAN, G. P.—The Statistic Atlas of England, Scotland, and Ireland. Part 12. Geological and Mining. Part 13. Hydrographical (Water Supply). Fol. *Edinburgh*. 1881-82.
- 8 BIRD, C.—A Geological Map of Yorkshire. Scale, four miles to an inch. *Bradford*.
- 9 ——— A Short Sketch of the Geology of Yorkshire. Pp. viii. + 187. Small geological map. 8vo. *London and Bradford*.
- 10 BLAKE, J. F.—On the Correlation of the Upper Jurassic Rocks of England, with those of the Continent. Part I. The Paris Basin. *Quart. Journ. Geol. Soc.*, vol. xxxvii., pp. 497-587. Abstract in *Ann. Soc. Geol. Nord.*, t. viii., pp. 232-237. 1882.
- 11 BOTHAMLEY, C. H.—[See T. E. Thorpe].
- 12 BROWN.—[See W. Shelford].
- 13 CAMERON, A. G.—The Subsidences above the Permian Limestone between Hartlepool and Ripon. *The Naturalist*, pp. 48-9.
- 14 CASH, W.—Researches in Fossil Botany. *The Naturalist*, pp. 49-50.
- 15 ——— [See Thomas Hick].
- 16 CHANCE, H. M.—The Millstone Grit in England and Pennsylvania. [Comparison of Yorkshire and Pennsylvania]. *American Journ. Sci.*, vol. xxi., pp. 134, 135.
- 17 CLARK, J. E.—Bear's Bone at York. [Bishopthorpe Gravel Pits]. *Nat. Hist. Journ.*, vol. v., p. 36.
- 18 ——— Glacial Sections at York. *The Naturalist*, pp. 47-8.
- 19 CLEMENTS, H.—The Fields of Great Britain: A Text-book of Agriculture adapted to the Syllabus of the

- Science and Art Department, South Kensington . . .  
 [Distribution of soils]. Pp. xxviii. + 364. 8vo. *London*.
- 20 COLEMAN, J.—Report of the Royal Commission on Agriculture. [Geological notes of the several districts]. (Parl. Rep.). Fol. *London*.
- 21 CROSSKEY, H. W.—Eighth Report . . . Erratic Blocks . . .  
 [Shap granite boulder at Filey, pp. 110, 111]. *Rep. Brit. Assoc.* for 1880, pp. 110-119.
- 22 DAKYNS, J. R.—On Glacial Deposits North of Bridlington.  
*Proc. Yorks. Geol. Soc.*, vol. vii., pt. 3, pp. 246-252.
- 23 DALLAS, W. S.—[See C. Struckmann].
- 24 DAVIS, J. W.—On a Group of Erratic Boulders at Norber, near Clapham, in Yorkshire. *Proc. Yorks. Geol. Soc.*, vol. vii., pt. 3, pp. 266-273.
- 25 ——— Report of the Raygill Fissure Exploration Committee.  
*Ibid.*, 300-306.
- 26 ——— On the Distribution of Fossil Fishes in the Yorkshire Coal-Fields. *Ibid.*, pp. 228-241.
- 27 ——— On *Anodontacanthus*, a new genus of Fossil Fishes from the Coal Measures. [Yorkshire and Edinburgh] ; with description of three new Species. *Quart. Journ. Geol. Soc.*, vol. xxxvii., pp. 427-429.
- 28 ——— On the Fish Fauna of the Yorkshire Coal Field. *Proc. Geol. Assoc.*, vol. vi., pp. 359-370.
- 29 DAVIS, R. H.—The Ancient Alum Well at Harrogate.  
*Journ. Chem. Soc.*, vol. xxxix., pp. 19, 20.
- 30 DE RANCE, C. E.—Sixth Report . . . Underground Waters . .  
 [Middlesborough, Stockton, Guisborough, Kirklington, Coatham, pp. 94-104]. *Rep. Brit. Assoc.* for 1880, pp. 87-106.
- 31 ETHERIDGE, R.—Anniversary Address: on the Analysis and Distribution of the British Palæozoic Fossils. *Quart. Journ. Geol. Soc.*, vol. xxxvii., *Proc.*, pp. 51-235.
- 32 FAIRLEY, T.—On the Blowing Wells near Northallerton.  
*Chem. News*, vol. xlv., p. 242. *Proc. Yorks. Geol. Soc.* for 1881, vol. vii., pt. 4, pp. 409-421, 1882 ; *Rep. Brit. Assoc.* for 1881, pp. 544-545. Analyses, pp. 601, 602 (1882).
- 33 FOX-STRANGWAYS, C.—The Geology of York and the Neighbourhood. *Sci. Goss.*, No. 200, pp. 169-172.

- 34 FOX-STRANGWAYS, C.—The Geology of the Oolitic and Liassic Rocks to the North and West of Malton. Explanation of Quarter-Sheet, 96 S.E. (N.S. 53). *Geological Survey Memoir*. Pp. 41. 8vo. London.
- 35 GEIKIE, J.—Prehistoric Europe, a geological sketch. [Yorkshire, pp. 94, 96-99, 264]. Pp. xviii., 592. 8vo. London.
- 36 HASTINGS, C. W.—Water Works Statistics [of the Principal Cities and Towns in Great Britain and Ireland]. 8vo. London. 1881 and following years.
- 37 HICK, THOMAS and WILLIAM CASH.—A Fossil from Halifax Coal Measures. *The Naturalist*, p. 58.
- 38 HUDLESTON, W. H.—Palæontology of the Yorkshire Oolites [See 1880].
- 39 HULL, E.—The Coalfields of Great Britain: their History, Structure, and Resources. With Descriptions of the Coalfields of our Indian and Colonial Empire, and of other parts of the World. Ed. 4. Pp. xviii.+556. 8vo. London. [See 1860].
- 40 HUNT, R.—Mineral Statistics. [See 1880].
- 41 INGLE, H.—[See T. E. Thorpe].
- 42 JOHNSTONE, MARGARET N.—[See T. E. Thorpe].
- 43 KEEPING, W.—A Popular Handbook to the Natural History Collection in the Museum of the Yorkshire Philosophical Society, York. [Includes a chapter on "The Collection of Yorkshire Fossils, pp. 33-54]. 8vo. York.
- 44 KENNEDY, CAROLINE L.—[See T. E. Thorpe].
- 45 KIDSTONE, R.—On the Structure of *Lepidodendron selaginoides* (Sternberg), from the Coal Measures, Halifax, Yorkshire. *Proc. Roy. Soc. Edinburgh*, vol. vi., pp. 97-105.
- 46 LAMPLUGH, G. W.—On a Shell-bed at the Base of the Drift at Speeton, near Filey, on the Yorkshire Coast. *Geol. Mag.*, dec. ii., vol. viii., pp. 174-180.
- 47 — On the Bridlington and Dimlington Glacial Shell-beds. *Ibid.*, pp. 535-546. *Rep. Brit. Assoc. for 1881*, p. 616. 1882.
- 48 — On a Fault in the Chalk of Flambro' Head, with some Notes on the Drift of the Locality. *Proc. Yorks. Geol. Soc.*, vol. vii., pt. 3, pp. 242-245.

- 49 LUCAS, J.—Rural Water Supply, with especial reference to the objects of the Public Health Water Act, 1878. [Hellifield, p. 149 ; Leeds, p. 172]. *Trans. Inst. Surveyors*, vol. xiii., No. 93, pp. 143-178 ; Discussion, pp. 179-200.
- 50 LYCETT, J.—Note on the Generic Distinctness of *Purpur-oidea* and *Purpura*, with Remarks upon the Purpuroid Shells figured in the *Geol. Mag.* Plate viii., Decade ii., Vol. vii., 1880. *Geol. Mag.*, dec. ii., vol. viii., pp. 498-502.
- 51 MANSON, D.—Sulphur Waters. Ed. 4. [See 1869].
- 52 MEADE, R.—The Coal and Iron Industries of the United Kingdom. Pp. xxi., +876. Maps. 8vo. *London*.
- 53 MIAL, L. C.—On some bones of *Ctenodus*. *Proc. York. Geol. Soc.*, vol. vii., pt. 3, pp. 289-299.
- 54 MUTER, J.—[See G. W. Wigner].
- 55 NATHORST, A. G.—Ueber neue Funde von fossilen Glacialpflanzen [between Spurn Point and Flamborough Head]. *Engler's Bot. Jahrb.*, Bd. i., Heft. 5, pp. 431-435.
- 56 OLIVER, G.—The Geology of Harrogate. The Sylabus of a Field-day with the Geologists of the British Association ; Harrogate, September 3rd, 1881. Pp. 15. 12mo. *Harrogate*.
- 57 ——— The Harrogate Waters. Data Chemical and Therapeutical, with notes on the Climate of Harrogate. 8vo. *London*.
- 58 OWEN, R.—A Monograph of the Fossil Reptilia of the Liassic Formations. [*Ichtyosaurus platyodon* and *I. acutirostris* from the Yorkshire Coast, pp. 117, 132]. Pp. 83-134 ; plates xxi.-xxxiii. ; *Monogr. Pal. Soc.*, vol. xxxv. for the year 1881. [See 1861].
- 59 PARSONS, H. F.—Report on the recent prevalence of Enteric Fever in the Bridlington Urban Sanitary District. *Local Government Board Rep.* Pp. 8. Fol. *London*.
- 60 PHILLIPS, J. A.—On the Constitution and History of Grits and Sandstones. [Bradford, Egton]. *Quart. Journ. Geol. Soc.*, vol. xxxvii., pp. 6-28.
- 61 POULTON, E. B.—Dowkerbottom Cave, Yorkshire. *The Naturalist*, p. 49.

- 62 REID, A. S.—On the Formation of Red Rocks. *23rd Rep. East Kent Nat. Hist. Soc.* for 1880, pp. 35, 36.
- 63 SHELFORD, W.—[Origin of the Humber Mud] in discussion on Mr. Brown's paper on Tidal and Upland Waters. *Proc. Inst. Civ. Eng.*, vol. lxvi., pp. 29-31.
- 64 SHRUBSOLE, G. W.—Further Notes on the Carboniferous Fenestellidæ. [Yorkshire species]. *Quart. Journ. Geol. Soc.*, vol. xxxvii., pp. 178-189.
- 65 SMITH, WILLIAM.—Old Yorkshire. Includes notes on The Devil's Arrows (pp. 16-17) by A. D. H. L.; and The Rudston Monolith (pp. 25-27) by T. Waller.
- 66 SPEAR, J.—Report on the prevalence of Enteric Fever in the Howden Rural Sanitary District in the East Riding of Yorkshire. *Local Government Board Report*. Fol. London.
- 67 SPENCER, JAMES.—Notes on Astromylon and its Root. *The Naturalist*, pp. 49-50.
- 68 STRUCKMANN, C.—Ueber den Parallelismus der hannoverschen und der englischen oberen Jurabildungen. *N. Jahrb. Bd.*, ii., pp. 77-102. Translated by W. S. DALLAS. *Geol. Mag.*, dec. ii., vol. viii., pp. 546-557.
- 69 THORPE, T. E.—Contributions to the History of the Mineral Waters of Yorkshire. Analyses by C. H. BOTHAMLEY, A. E. WILSON, H. INGLE, CAROLINE L. KENNEDY, and MARGARET N. JOHNSTONE. *Journ. Chem. Soc.*, vol. xxxix., pp. 497-516. Also reprint, pp. 20. 8vo.
- 70 VEITCH, W. Y.—On the Geology of the District around Middlesbrough. (Abstract). *Proc. Yorks. Geol. Soc.*, vol. vii., pt. 3, p. 284.
- 71 VINE, G. R.—Further notes on the Family Diastoporidæ, Busk. Species from the Lias and Oolite. *Quart. Journ. Geol. Soc.*, vol. xxxvii., pp. 380-390.
- 72 WALLER, T.—[See William Smith].
- 73 WHIDBORNE, G. F.—Tabular Synopsis of the Geographical Distribution of the Plesiosaurs. *Quart. Journ. Geol. Soc.*, vol. xxxvii., p. 480.
- 74 WIGNER, G. W., and J. MUTER.—The Analyses of the Public Water Supplies of England. [Bradford and Hull]. *The Analyst*, vol. vi., pp. 43-49.
- 75 WILLIAMSON, W. C.—On the Organization of the Fossil

- Plants of the Coal Measures. Part XI. [Halifax]. *Phil. Trans.*, vol. clxxii., pt. 2, pp. 283-305.
- 76 WILSON, A. E.—[See T. E. Thorpe].
- 77 WILSON, E.—The Permian Formation in the North-east of England; with special reference to the physical conditions under which these rocks were formed. *Midl. Nat.*, vol. iv., pp. 97-101, 121-124, 187-191, 201-208, pls. vi.-ix.
- 78 WOOD, W. H.—On a Chemical Method of distinguishing Black Obsidian from Black Blast Furnace Slag. [Analysis of slag]. *Proc. Yorks. Geol. Soc.*, vol. vii., pt. 3, p. 274.
- 79 WRIGHT, T.—Monograph on the Lias Ammonites of the British Islands, Part IV. Description of Species. [Yorkshire, pp. 271, 275, 277, 282, 285, 287, 289, 291, 295, 297, 304, 306, 310, 314, 319, 326]. Pp. 265-328; Plates xxiiA., xxiiB., xli.-xlviii. *Monogr. Pal. Soc.*, vol. xxxv, for the year 1881.
- 1882.
- 1 ANON.—The Boring for Coal near Goole. [Carlton Towers, near Snaith]. *Coll. Guard.*, vol. xliii., p. 345.
- 2 ——— Our Coalfields. [Bradford, Huddersfield]. *Ibid*, vol. xliv., p. 669.
- 3 ——— Reports of the Inspectors of Mines. *Parliamentary Report*. Fol. London.
- 4 ——— Health Resorts and their Uses. [See J. B. Yeo, 1885].
- 5 AIRY, H.—Report on the Sanitary State of Hull. *Local Government Board Report*. Fol. London.
- 6 ALEXANDER, W.—[See 1839].
- 7 ALLISON, THOS.—The Geology of Middlesbrough and its Surroundings. *Proc. Cleveland Inst. Engineers*, pp. 155-173.
- 8 BAKER, J. B.—The History of Scarborough from the earliest date. [Geology, pp. 19-22, being a quotation from the *Geological Survey Memoir*]. Pp. xiv.+527. 4to. London.
- 9 BAKER, J. G.—North Yorkshire. Ed. 2, pt. 1. [See 1863].
- 10 BARROW, G.—[See C. Fox-Strangways].
- 11 BEVAN, G. P.—Statistical Atlas. [See 1881].
- 12 BLAKE, J. F.—[See 1881].

- 13 BRADSHAW, B.—Dictionary of Mineral Waters, Climatic Health Resorts, Sea Baths, and Hydropathic Establishments of the World. [Harrogate, p. 76]. 12mo. *London*. Ed. iv., Pp. lxxxiii., 408. 18mo. *London*. 1888, Another ed. 1892. Reprint, 1893.
- 14 BUTTERELL, J. D.—A list of the Land and Freshwater Mollusca observed in the neighbourhood of Beverley. [Section at Alexandra Dock, Hull]. *Journ. Conch.*, vol. iii., pp. 289-296.
- 15 CAMERON, A. G.—On Subsidences over the Permian Boundary between Hartlepool and Ripon. *Proc. Yorks. Geol. Soc.* for 1881, vol. vii., pt. 4, pp. 342-351; *Rep. Brit. Assoc.* for 1881, p. 617.
- 16 CASH, W.—On the Halifax Hard Seam.—*Rep. Brit. Assoc.* for 1881, pp. 626-627.
- 17 — [See T. Hick].
- 18 CLARK, J. E.—Glacial Sections at York, and their Relation to later Deposits. *Proc. Yorks. Geol. Soc.*, vol. vii., pt. 4, pp. 421-439; *Rep. Brit. Assoc.* for 1881, pp. 614-616.
- 19 C[LARKE], W. E.—Yorkshire Naturalists' Union at Scarborough. [Geological Notes]. *The Naturalist*, pp. 14-16.
- 20 CROSSKEY, H. W.—Ninth Report . . . Erratic Blocks . . . [Shap granite boulder at Filey, p. 205]. *Rep. Brit. Assoc.* for 1881, pp. 204-218.
- 21 — Note on some additions to the Fauna of the Post-Tertiary Beds at Bridlington, Yorkshire. *Proc. Birmingham Phil. Soc.*, vol. ii., pt. 2, pp. 373-378.
- 22 DAKYNS, J. R.—On Flots. *Proc. Yorks. Geol. Soc.*, vol. vii., pt. 4, pp. 381-383.
- 23 DAVIES, R. V. F.—A visit to a Yorkshire Dale. [Chapel-le-Dale, near Ribbleshead. Account of swallow holes, etc.]. *Trans. Eastbourne Nat. Hist. Soc.*, n.s., vol. i., pt. 4 (mis-called 3), pp. 20-25.
- 24 DAVIS, J. W.—On the Exploration of a Fissure in the Mountain Limestone at Raygill. *Rep. Brit. Assoc.* for 1881, pp. 645, 646.
- 25 — On the Zoological position of the genus *Petalorhynchus*, Ag. A Fossil Fish from the Mountain Limestone. *Ibid.*, p. 646.

- 26 DAVIS, J. W.—On *Diodontopsodus* Davis, a new genus of Fossil Fishes from the Mountain Limestone, at Richmond, in Yorkshire. *Rep. Brit. Asso.*, 1811, p. 646.
- 27 DE RANCE, C. E.—The Water Supply of England and Wales; its Geology, Underground Circulation, Surface Distribution and Statistics. [Hydrogeological Map, etc.]. Pp. vi.+623. 8vo. *London*.
- 28 ——— Seventh Report . . . Underground Waters . . [Scarborough, York, pp. 311-312]. *Rep. Brit. Asso.* for 1881, pp. 309-316.
- 29 ETHERIDGE, R.—Anniversary Address: On the Analysis and Distribution of the British Jurassic Fossils. *Quart. Journ. Geol. Soc.*, vol. xxxviii., Proc., pp. 59-236.
- 30 FAIRLEY, T.—The Blowing Wells near Northallerton. [See 1881].
- 31 FEDDERSEN, ARTHUR.—To Mosefund [refers to the Roos Carrs Images found in the Peat]. *Særtryk af Aarb. for Nord. Oldk. og Hist.*, 1881 [publ. 1882]. *Kjobenhavn*, pp. 369-389.
- 32 FLIGHT, W.—Report of an Examination of the Meteorites of . . . Middlesbrough in Yorkshire. *Proc. Roy. Soc.*, vol. xxxiii., pp. 343-347. *Phil. Trans.*, vol. clxxiii., pt. 3 pp. 885-899. 1883.
- 33 FOX-STRANGWAYS, C., and G. BARROW.—The Geology of the Country between Whitby and Scarborough. Explanation of Quarter Sheet 95, N.W. (N.S. 44). *Geological Survey Memoir*, pp. iv. 60. 8vo. *London*.
- 34 GALLOWAY, R. L.—History of Coal Mining in Great Britain. [Ardsley Colliery, near Leeds.] Pp. xi.+273. 8vo. *London*.
- 35 GEIKIE, A.—Text-Book of Geology. Pp. xi.+971. 8vo. *London*. Ed. 2. Pp. xvi.+992. 1885. Ed. 3. Pp. xvi.+1147. 1893. Ed. 4. Pp. xxi.+1472. 1903.
- 36 GREEN, A. H.—[See 1876].
- 37 GRAINGE, W.—History of Harrogate. Ed. 2. [See 1871].
- 38 HARRISON, W. J.—Geology of the Counties of England and of North and South Wales. Pp. 346. 8vo. *London*. [See Notice in *The Naturalist*, p. 133].
- 39 HICK, T., and W. CASH.—A Contribution to the Flora of the Lower Coal Measures of the Parish of Halifax. pt. 3



- Proc. Yorks. Geol. Soc.*, vol. vii., pt. 4., pp. 400-405. *Rep. Brit. Assoc.* for 1881, pp. 679, 680. See also 1885.
- 40 HORSFALL, J.—[See R. Law].
- 41 HUDLESTON, W. H.—Palæontology of the Yorkshire Oolites. [See 1880.].
- 42 HUGHES, S.—A. Treatise on Waterworks. [See under 1856].
- 43 HULL, E.—Palæo-Geological and Geographical Maps of the British Isles and adjoining parts of the Continent of Europe. *Trans. Roy. Dublin Society*, n.s., vol. i., pt. 19, pp. 257-296.
- 44 ——— Contributions to the Physical History of the British Isles. With a Dissertation on the Origin of Western Europe, and of the Atlantic Ocean. Pp. xvi.+143. 8vo. London.
- 45 JONES, T. R.—Catalogue of the Fossil Foraminifera in the British Museum (Natural History). [*Pulvinulina caracolla*, from Speeton, p. 9]. Pp. xxiv., 100. 8vo. London.
- 46 LAMPLUGH, G. W.—The Bridlington Crag. *Geol. Mag.*, dec. ii., vol. ix., pp. 383, 384.
- 47 ——— On Glacial Sections near Bridlington. *Proc. Yorks. Geol. Soc.*, vol. vii., pt. 4, pp. 383-397.
- 48 ——— On the Bridlington and Dimlington Glacial Shellbeds. *Rep. Brit. Assoc.* for 1881, p. 616.
- 49 ——— [See 1881].
- 50 LAW, R., and J. HORSFALL.—On the Discovery of Flint Implements on the High Hills in the neighbourhood of Rochdale. [Saddleworth, Marsden]. *Trans. Manchester Geol. Soc.*, vol. xvi., pp. 287-289. Discussion, pp. 289-293.
- 51 LOW, R. BRUCE.—The Etiology of Endemic Goitre. [Analyses of Springs]. *Journ. Brit. Med. Soc.*, Jan. 14 and 21.
- 52 LUCAS, J.—Vestiges of the Ancient Forest on part of the Pennine Chain. *Proc. Yorks. Geol. Soc.*, vol. vii., pt. 4, pp. 368-373.
- 53 MARR, J. E.—On some Sections in the Lower Palæozoic Rocks of the Craven District. *Proc. Yorks. Geol. Soc.*, vol. vii., pt. 4, pp. 397-399. *Rep. Brit. Assoc.* for 1881, p. 650.
- 54 MEADE, R.—The Coal and Iron Industries of the United Kingdom . . . . [Yorkshire Coalfield, pp. 32-58 ; York-

- shire Iron Industries, pp. 347-414; Geological Distribution of Iron Ores, p. 821]. Pp. xxi. 876. 8vo. *London*.
- 55 MORTIMER, J. R.—On the Sections of the Drift obtained by the New Drainage Works at Driffeld. *Proc. Yorks. Geol. Soc.*, vol. vii., pt. 4, pp. 373-381.
- 56 PARKIN, C.—On Jet Mining. *Trans. N. Eng. Inst. Mining Eng.*, vol. xxxi., pp. 51-58. *Cassell's Mag.*, vol. viii., pp. 143-146.
- 57 POULTON, E. B.—A preliminary account of the working of Dowkerbottom Cave, in Craven, during August and September, 1881. *Proc. Yorks. Geol. Soc.*, vol. vii., pt. 4, pp. 351-368. *Rep. Brit. Assoc.* for 1881, pp. 622, 633.
- 58 RANCE, C. E. DE.—[See C. E. De Rance].
- 59 QUAIN.—[See H. Weber].
- 60 ROBERTS, G.—Topography and Natural History of Loft-house and its neighbourhood. 8vo. *London*.
- 61 SPENCER, J.—Researches in Fossil Botany. *Rep. Brit. Assoc.* for 1881, pp. 627, 628.
- 62 ——— Notes on Astromylon and its Root. *Ibid.*, pp. 628-629.
- 63 ——— Astromylon and its Affinities. *Proc. Yorks. Geol. Soc.*, vol. vii., pt. 4, pp. 439-444.
- 64 STEVENSON, A. L.—Remarks on the Points of Interest at the Skelton Park and Lumpsey Mines, on the occasion of the Visit of the Institute, September 16th, 1881. [Section at Lumpsey, p. 113]. *Trans. N. Eng. Inst. Eng.*, vol. xxxi., pp. 105-114.
- 65 VINE, G. R.—Notes on the Carboniferous Polyzoa of North Yorkshire. *Proc. Yorkshire Geol. Soc.*, vol. vii., pt. 4, pp. 329-341.
- 66 WADE, H.—Report of the Geological Section. [Barnsley Soc.]. *Quart. Trans. Barnsley Nat. Soc.*, vol. ii., pp. 29 and 34.
- 67 WATTS, W.—On a Section of Coal Measures in Saddleworth. *Trans. Manchester Geol. Soc.*, vol. xvi., pp. 364-368.
- 68 WEBER, H.—Mineral Waters. *Quain's Dictionary of Medicine*, pp. 985-992. Ed. 2, pp. 139-147, 1894. Ed. 3, 1902.
- 69 WILSON, J. H.—Wilson's Dictionary of Harrogate. [Geology, pp. 44, 45]. 8vo. *Harrogate*.

- 70 WOOD, S. V., Junr.—The Bridlington Crag. *Geol. Mag.*, dec. ii., vol. ix., p. 192.
- 71 ——— The Lower Pliocene Period in England. *Quart. Journ. Geol. Soc.*, vol. xxxviii., pp. 667-745.
- 72 WRIGHT, T.—Monograph of the Lias Ammonites of the British Islands. Part V. Description of Species. [Yorkshire, pp. 331, 338, 340-344, 350, 355, 357, 362, 364, 365, 369, 371, 380, 382, 385, 390, 393, 400]. Pp. 329-400; plates xlix.-lxix. *Monogr. Pal. Soc.*, vol. xxxvi. for the year 1882.
- 1883.
- 1 ANON.—Lake-Dwellings in Yorkshire. [Ulrome]. *Standard*, Oct. 20th, p. 2.
- 2 ——— Salt Working at Middlesbrough. [History and depth]. *Journ. Soc. Arts*, vol. xxxi., pp. 1004-1005.
- 3 ——— Middlesbrough Salt Deposits. [Geology and History]. *Engineering*, vol. xxxvi., pp. 341, 342.
- 4 ——— Reports of the Inspectors of Mines. *Parliamentary Report*. Fol. London.
- 5 BELL, HUGH.—The Salt Deposits of Middlesbrough, and the Mode of Winning Them. *Proc. Cleveland Inst. Engineers*, pp. 107-127.
- 6 BEVAN, G. PHILLIPS.—Tourist's Guide to the West Riding of Yorkshire. Ed. 3. London. 126 pp.
- 7 BROWN, J. C.—The Forests of England and the Management of them in bye-gone times. [Coast erosion, pp. 168-174]. Pp. xvi.+263. 8vo. London.
- 8 CASH, W.—Preliminary Report of the Committee on the Flora of the 'Halifax Hard Bed,' Lower Coal-Measures. *Rep. Brit. Assoc.* for 1882, pp. 267, 268.
- 9 ——— Yorkshire Fossil Mollusca. *Proc. Yorks. Geol. Soc.*, vol. viii., pt. 1, pp. 77-88.
- 10 COLE, E. M.—On the White Chalk of Yorkshire. *Proc. Yorks. Geol. Soc.*, vol. viii., pt. 1, pp. 21-27.
- 11 ——— Geological Rambles in Yorkshire: Leeds to Scarborough, Filey, Whitby, and Bridlington. Pp. 112. 8vo. London.
- 12 CROSSKEY, H. W.—Tenth Report . . . Erratic Blocks . . . [Boulders in the North Sea, p. 243]. *Rep. Brit. Assoc.* for 1882, pp. 243-248.

- 13 DAKYNS, J. R.—The Bridlington Crag. *Geol. Mag.*, dec. ii., vol. x., p. 93.
- 14 DAVIES, R. V. F.—A Visit to a Yorkshire Dale [Chapel-le-Dale]. *Trans. Eastbourne N. H. Soc.*, n. ser., vol. i., pt. 3, pp. 20-25.
- 15 DAVIS, J. W.—On some Sections Exposed during the Formation of the Line of Railway between Upton and Kirk Smeaton. *Proc. Yorks. Geol. Soc.*, vol. viii., pt. 1, pp. 107-113.
- 16 ——— On the fossil Fishes of the Carboniferous Limestone Series of Great Britain. [Yorkshire, pp. 374-376, 380, 381, 385, 386, 397, 399, 408, 410, 444, 456, 458, 478, 495, 499, 514, 522, 543-548]. *Trans. Roy. Dub. Soc.*, ser. 2, vol. i., pp. 327-548 ; (Abstract) *Quart. Journ. Geol. Soc.*, vol. xxxviii. ; *Proc.*, pp. 12, 13.
- 17 ——— Notes on the Occurrence of Fossil Fish-remains in the Carboniferous Limestone Series of Yorkshire. *Proc. Yorks. Geol. Soc.*, vol. viii., pt. 1, pp. 39-63.
- 18 ——— Biographical Notices of Eminent Yorkshire Geologists. 1, John Phillips. *Proc. Yorks. Geol. Soc.*, vol. viii., pt. 1, pp. 3-20.
- 19 ——— [See W. H. Hudleston].
- 20 DE RANCE, C. E.—Eighth Report . . . Underground Waters . . . [Strensall, Salton, pp. 228-230]. *Rep. Brit. Assoc. for 1882*, pp. 213-239.
- 21 DURANT-FARDEL, M.—[See under 1857].
- 22 EDDY, J. R.—On the Lead Veins in the neighbourhood of Skipton. *Proc. Yorks. Geol. Soc.*, vol. viii., pt. 1, pp. 63-69.
- 23 FLIGHT, W.—[See under 1882].
- 24 FORSTER, W.—A Treatise on a Section of the Strata from Newcastle-upon-Tyne to Cross Fell, with Remarks on Mineral Veins ; also, Tables of Strata in Northumberland, Durham, Yorkshire, Derbyshire, West Cumberland, and Fifeshire ; to which is added a Treatise on the Discovery, the Opening, and the Working of Lead Mines, and the Dressing and Smelting of Lead Ores. Ed. 3, revised and corrected to the present time by W. NALL. Pp. lvi. + 208. 8vo. *Newcastle and London*. [See also *Nature*, May 1st, 1884, p. 3].

- 25 FOSSICK, W. G.—Fifty Years' History of the Iron Trade. Diagrams showing the production of Iron in the United Kingdom, the Weight of Iron and Steel Exported, and the Prices of Typical Descriptions of Iron, etc., from 1830 to 1882.
- 26 GRANTHAM, R. F.—Land Reclaimed from the Sea. [Sunk Island and the Holderness Coast]. *Trans. Inst. Surveyors*, vol. xv., pp. 297-312, Discussion, pp. 312-324.
- 27 GREENWELL, G. C.—The Duration of the Coal of Great Britain and Ireland. [Yorkshire, p. 144]. *Trans. N. Inst. Min. Eng.*, vol. xxxii., pp. 135-148.
- 28 HARDWICKE, H. J.—Health Resorts and Spas ; or, Climatic and Hygienic Treatment of Disease. [Harrogate, pp. 59, 60]. Pp. viii., 192. 8vo. *London*.
- 29 HAVILAND, A.—Scarborough as a Health Resort : its Physical Geography, Geology, Climate, and Vital Statistics with Health Guide, Map, etc. Pp. 100. 8vo. *London and Scarborough*.
- 30 HINDE, G. J.—Catalogue of the Fossil Sponges in the British Museum (Natural History), with descriptions of new and little-known species. . . . Pp. viii., 248 ; 38 plates. 4to. *London*.
- 31 HORSFALL, J.—[See R. Law].
- 32 HUDLESTON, W. H.—Excursion to the West Riding of Yorkshire. *Proc. Geol. Assoc.*, vol. vii., pp. 420-438 ; *Proc. Yorks. Geol. Soc.*, vol. viii., pt. 1, pp. 113-123.
- 33 ——— Palæontology of the Yorkshire Oolites. [See 1880].
- 34 ——— and J. W. DAVIS.—Excursion to the West Riding of Yorkshire. *Proc. Yorks. Geol. Soc.* for 1882, vol. viii., pt. 1, pp. 123-135.
- 35 JAMES, M. P.—[See C. R. C. Tichborne].
- 36 KEEPING, W.—The Geology of the New Railway Cuttings in the Cave District, South Yorkshire. *Ann. Rep. York Phil. Soc.* for 1882, p. 45.
- 37 ——— and C. S. MIDDLEMISS.—On some New Railway Sections and other Rock Exposures in the District of Cave, Yorkshire. *Geol. Mag.*, dec. ii., vol. x., pp. 215-221.
- 38 LAMPLUGH, G. W.—Glacial Sections near Bridlington. *Proc. Yorks. Geol. Soc.*, vol. viii., pt. 1, pp. 27-38.
- 39 ——— Thornwick Bay, Flamborough. *Ibid.*, pp. 103-107.

- 40 LAW, R., and J. HORSFALL.—On the Discovery of Flint Implements on the Hills between Todmorden and Marsden. *Proc. Yorks. Geol. Soc.*, pp. 70-76.
- 41 LYCETT, J.—A Monograph of the British Fossil Trigonæ. Supplement No. 2. [*Trigonæ signata* from Yorkshire, p. 5]. Pp. 5-18; plates i.-iv. *Monogr. Pal. Soc.*, vol. xxxvii., for the year 1883.
- 42 MACKINTOSH, D.—Results of Observations in 1882, on the position of Boulders relatively to the Underlying and Surrounding Ground in North Wales and North-west Yorkshire; with remarks on the evidence they furnish of the recency of the close of the Glacial Period. [Clapham]. *Quart. Journ. Geol. Soc.*, vol. xxxix., *Proc.*, pp. 67-69.
- 43 MIDDLEMISS, C. S.—[See W. Keeping].
- 44 MORRIS, J.—The Chalk, its Distribution and Subdivisions. *Proc. Geol. Assoc.*, vol. viii., No. 4, pp. 208-226.
- 45 NALL, W.—[See W. Forster].
- 46 PARKIN, C.—On the Mineral Resources of the Rosedale Abbey District. *Trans. N. Eng. Inst. Eng.*, vol. xxxii., pp. 43-53.
- 47 READE, T. M.—The Drift-beds of the North-west of England and North Wales. Pt. 2, Their Nature, Stratigraphy, and Distribution. [Settle]. *Quart. Journ. Geol. Soc.*, vol. xxxix., pp. 83-132.
- 48 ——— A Traverse of the Yorkshire Drift. [Glaciation of the Vale of York]. *Proc. Liverpool Geol. Soc.* for 1882, vol. iv., pt. 5, pp. 364-380.
- 49 SORBY, H. C., and G. R. VINE.—Third Report of the Committee on Fossil Polyzoa. *Rep. Brit. Assoc.* for 1882, pp. 249-266.
- 50 TEW, T. W.—On the Recent Extension of Mining Operations under the Permian Formations. *Proc. Yorks. Geol. Soc.*, vol. viii., pp. 89-102.
- 51 TICHBORNE, C. R. C., and M. P. JAMES —The Mineral Waters of Europe. [Harrogate, pp. 132-169]. 8vo. *London*.
- 52 TOMES, R. F.—On some new or imperfectly known Madreporia from the Coral Rag and Portland Oolite of the Counties of Wilts., Oxford, Cambridge, and York. *Quart. Journ. Geol. Soc.*, vol. xxxix., pp. 555-565.

- 53 VINE, G. R.—Third Report of the Committee . . . on Fossil Polyzoa (Jurassic Species—British area only). *Rep. Brit. Assoc.* for 1882, pp. 249-266.
- 54 ——— [See H. C. Sorby].
- 55 WATTS, W.—Interesting Sections of Strata at Readycon Dean, Saddleworth. *Trans. Manchester Geol. Soc.*, vol. xvii., pp. 114-126.
- 56 WILLIAMSON, W. C.—On the Organization of the Fossil Plants of the Coal-Measures. [Astromyelon from Halifax]. *Phil. Trans.*, vol. 174, pp. 459-475.
- 57 ——— On some Anomalous Oolitic and Palæozoic Forms of Vegetation [Williamsonia gigas, etc.]. *Proc. Roy. Inst.* vol. x., pp. 220-232.
- 58 WOODWARD, H.—A Monograph of the British Carboniferous Trilobites. Pt. 1. [Yorkshire, pp. 13, 18, 21, 23, 27, 29, 30, 32, 34, 35]. Pp. 1-38; plates i.-vi. *Monogr. Pal. Soc.*, vol. xxxvii., for the year 1883.
- 59 ——— Synopsis of the Genera and Species of Carboniferous Limestone Trilobites. *Geol. Mag.*, dec. ii., vol. x., pp. 445-454, 481-487, 534-536; and dec. iii., vol. i., pp. 484-488. 1884.
- 60 WRIGHT, T.—Monograph on the Lias Ammonites of the British Islands. Pt. 6, Description of Species. [Yorkshire, pp. 402, 405, 412, 414, 416, 420, 428, 429, 432, 433, 436, 437, 438]. Pp. 401-440; plates lxx.-lxxvii. *Monogr. Pal. Soc.*, vol. xxxvii., for the year 1883.
- 61 WHITAKER, W.—On things in General, and the Red Chalk of Norfolk in Particular. [Compared with the Red Chalk of Yorkshire]. *Proc. Norwich Geol. Soc.*, vol. i., pt. 8, pp. 207-236.

1884.

- 1 ANON.—The Hull and Barnsley Railway and Dock. [Few geological notes]. *The Engineer*, vol. lvii., pp. 75, 76.
- 2 ——— Ovenden Naturalists' Society. [Report of, refers to fossil fungi from the Halifax Hard Bed]. *Naturalist*, 1883-4, pp. 107-8.
- 3 ——— The Minerals on the Hull and Barnsley Railway. [Geology near Drax and Snaith]. *Coll. Guard.*, vol. xlvii., p. 859.

- 4 ANON.—The South Yorkshire Coalfield and its Future.  
*Coll. Guard.*, p. 579.
- 5 ——— Mineral Statistics of the United Kingdom of Great Britain and Ireland. . . . Prepared by H.M. Inspectors of Mines, 1882-1896. Fol. *London*, 1884-1897.  
[See also R. Hunt, 1855; Reports, 1895, 1897].
- 6 BEVAN, G. P.—Tourist's Guide to the West Riding. Ed. 4.  
[See 1877].
- 7 ——— Tourist's Guide to the East and North Ridings. Ed. 3. [See 1878].
- 8 BRADY, G. S.—[See T. Rupert Jones].
- 9 BROWELL, E. I. J.—Address to . . . The Tyneside Naturalists' Field Club, May 11th, 1882. [Yorkshire Geological Notes]. *Nat. Hist. Trans, Northumb., Durham and Newcastle*, vol. 8, pp. 159-168.
- 10 BURNETT, R. T.—Formation and Distribution of the Carboniferous Limestone [Abstract]. *Rep. Manch. Sci. Students' Assoc.* for 1883, p. 49.
- 11 CARTER, R.—On the Mineral Wells of Harrogate. *Proc. Yorks. Geol. and Polyt. Soc.*, N.S., vol. 8, pt. 3, p. 313.
- 12 CASH, W.—Report of the Committee appointed for the purpose of investigating the Fossil Plants of Halifax. *Rep. Brit. Assoc.* for 1883, p. 160.
- 13 CLARKE, T. T.—The Yorkshire Caves: a Three Days' Trip with the Tyneside Field Club, Sept. 14th to 16th, 1882. *Trans. Northumberland, Durham, Nat. Hist. Soc.*, vol. viii., pp. 50-67.
- 14 C[LARKE], W. E.—See W. D. R[oebuck].
- 15 COLE, E. M.—The Yorkshire Naturalists' Union at Helmsley. *Naturalist*, p. 84; at Spurn Point, *ibid.*, p. 93.
- 16 CORDEAUX, J.—The Spurn. [Notes of Mammalia, boulders, etc.]. *Ibid.*, pp. 1-8.
- 17 CROSSKEY, H. W.—Eleventh Report . . . Erratic Blocks. . . . [Sheffield, pp. 136-139]. *Rep. Brit. Assoc.* for 1883, pp. 136-146.
- 18 ——— [See G. W. Lamplugh].
- 19 DAVIDSON, T.—A Monograph of the British Fossil Brachipoda. Vol. v., Silurian and Devonian Supplements. General Summary with Catalogue and Index of the British Species. *Monogr. Pal. Soc.*, vol. xxxviii., for the year 1884.



- 20 DAVIS, J. W.—On a Pile Dwelling recently discovered at Ulrome, in Holderness, Yorkshire. *Rep. Brit. Assoc.* for 1883, pp. 567, 568.
- 21 ——— Geological Excursion to Holderness, the Kilnsea Shell Mounds, Spurn Point, and the Pile Dwellings at Ulrome. *Proc. Yorks. Geol. Soc.*, vol. viii., pt. 2, pp. 269-275.
- 22 ——— Report of the Committee appointed to assist in the Exploration of Raygill Fissure, Yorkshire. *Rep. Brit. Assoc.*, for 1883, pp. 133-135.
- 23 ——— On the Occurrence of Remains of Labyrinthodonts in the Yoredale Rocks of Wensleydale. *Ibid.*, p. 492.
- 24 ——— On some Fossil Fish-remains found in the Upper Beds of the Yoredale Series at Leyburn, in Yorkshire. *Ibid.*, pp. 492, 493; *Quart. Journ. Geol. Soc.*, vol. xl., pp. 614-635; *Ann. Mag. Nat. Hist.*, ser. 5, vol. xiii., pp. 145-146; *Geol. Mag.*, dec. iii., vol. i., pp. 91, 92.
- 25 ——— On a new Species of *Cœlacanthus* [*tingleyensis*] from the Yorkshire Cannel Coal. *Trans. Linn. Soc.*, ser. 2; *Zoology*, vol. ii., pp. 427-433.
- 26 ——— Geological Evolution. [River Calder, p. 6; Yorkshire limestones, p. 21]. *Nat. World*, vol. i., pp. 4-6, 21-23.
- 27 DAVIS, R. H.—Report upon the Analytical Examination of all the Sulphur Springs belonging to the Harrogate Improvement Commissioners. Pp. 15. 8vo. *Harrogate*.
- 28 DE RANCE, C. E.—On the Occurrence of Brine in the Coal-Measures, with some remarks on filtration. [Yorkshire, p. 63]. *Trans. Manchester Geol. Soc.*, vol. xviii., pp. 60-81, Discussion, pp. 81, 140-148.
- 29 ——— Ninth Report . . . Underground Waters . . . [Irtton, near Scarborough, p. 151]. *Rep. Brit. Assoc.* for 1883, pp. 147-159.
- 30 EASTERFIELD, T. H.—A Glacial Deposit near Doncaster. [Balby]. *Proc. Yorks. Geol. Soc.*, vol. viii., pt. 2, p. 212.
- 31 ELLIS, R.—A Medical Guide to the Principal Health Resorts of Northern England, with new chapters on Whitby, Scarboro', Redcar, Saltburn, Harrogate, etc. [Geology, pp. 137, 138; Analyses, p. 139]. Pp. 175. 8vo. *London*.
- 32 FAWCETT, WILLIAM.—Address on Fossil Plants from various Formations. *Proc. Geol. Assoc.*, vol. viii., April, pp. 329-332.

- 33 FOX-STRANGWAYS, C.—The Geology of the Country North-east of York and South of Malton. Explanation of Quarter Sheet, 93 N.E. (N.S. 63). *Geological Survey Memoir*. Pp. 40. 8vo. London.
- 34 ——— Particulars of a Well-boring at Irton, near Scarborough. *Rep. Brit. Assoc.*, for 1883, p. 151.
- 35 GARDNER, J. S.—British Cretaceous Nuculidæ [Speeton Clay]. *Quart. Journ. Geol. Soc.*, vol. xl., pp. 120-145.
- 36 GEOLOGICAL SURVEY.—Horizontal Sections. Nos. 133, 135, 137, 138, 139. [See also under 'Maps' in Appendix].
- 37 GEORGE, I. E.—On the Denudation of Limestone. [Swallow-holes in Craven and at Ingleborough]. *Trans. Liverpool Geol. Assoc.*, vol. iv., pp. 22-29.
- 38 HEMINGWAY, W.—Fossil Flora of the Barnsley district. *Trans. Barnsley Nat. Hist. Soc.*, vol. iv., p. 7-9.
- 39 ——— Geology [near Barnsley: Notes on fossils and observations at Darfield]. *Ibid.*, pp. 6, 16.
- 40 HUDLESTON, W. H.—Yorkshire Jurassic Gasteropoda. [See 1880].
- 41 ——— Palæontology of the Yorks. Oolites. No. 2. Gasteropoda of the Oxfordian and Lower Oolites. *Geol. Mag.*, Feb.-July, pp. 49-63, 107-115, 145-154, 193-204, 241-252, 293-303.
- 42 ——— The Geology of Malton and Neighbourhood, being the Presidential Address delivered before the Malton Field Naturalists' and Scientific Society. . . . Nov., 18th, 1884. *Malton*. 42 pp.
- 43 JEFFREYS, J. GWYN.—[See G. W. Lamplugh].
- 44 JONES, T. R., J. W. KIRBY and G. S. BRADY.—A Monograph of the British Fossil Entomostraca from the Carboniferous Formations. Pt. 1, No. 2, The Cypridinadæ and their Allies. [*Entomis burrovii*, from Settle, p. 86]. Pp. i.-iii., 57-92; plates vi., vii. *Monogr. Pal. Soc.*, vol. xxxviii., for the year 1884.
- 45 JUKES-BROWNE, A. J.—The Student's Handbook of Physical Geology. [Yorkshire, pp. 102, 125, 190, etc.]. Pp. xii., 514. 8vo. London.
- 46 LAMPLUGH, G. W.—Glacial Sections near Bridlington. Pt. 3, The Drainage Sections. *Proc. Yorks. Geol. Soc.*, vol. viii., pt. 2, pp. 240-254.

- 47 LAMPLUGH, G. W.—On a Recent Exposure of the Shelly Patches in the Boulder Clay at Bridlington Quay. With Notes on the Fossils by J. GWYN JEFFREYS, E. T. NEWTON, and H. W. CROSSKEY. *Quart. Journ. Geol. Soc.*, vol. xl., pp. 312-327.
- 48 LEBOUR, G. A.—Note on a deposit of Lacustrine Marl in West Yorkshire [near Settle]. *Naturalist*, vol. x., Aug. 1884, pp. 16, 17. [See also loc. cit., p. 66].
- 49 LEES, F. A.—Botany and Natural History of Upper Wensleydale [includes Geology]. *Hawes*. 8vo., pp. 14.
- 50 MANSON, D.—Sulphur Waters. Ed. 5. [See 1869].
- 51 MANSON, R. T.—Zig-zag Ramblings of a Naturalist [along the Tees Valley]. Pp. 159. 8vo. *Darlington*. Ed. 2, 1898.
- 52 MIALL, L. C.—On a new specimen of *Megalichthys* from the Yorkshire Coalfield. [Hard Coal, Idle]. *Quart. Journ. Geol. Soc.*, vol. xl., pp. 347-352; *Ann. Mag. Nat. Hist.*, ser. 5, vol. xiii., pp. 483, 484.
- 53 ——— Descriptive Guide to the Mineral Collection. Leeds Lit. and Phil. Soc. *Leeds*. Ed. 2.
- 54 MILES, C. E.—Mineral Springs [General conditions]. *Trans. Liverpool Geol. Assoc.*, vol. iv., pp. 47-59.
- 55 MORTIMER, J. R.—Description of the Origin and Distribution of the Un-water-worn Chalk-gravel on the Yorkshire Chalk Hills, supplemented by an Account of neighbouring and somewhat contemporaneous Deposits. *Proc. Geol. Assoc.*, vol. viii., No. 5, pp. 287-298.
- 56 NEWTON, E. T.—[See G. W. Lamplugh].
- 57 O'REILLY, J. P.—Catalogue of the Earthquakes having occurred in Great Britain and Ireland during Historic Times; arranged relatively to Localities and Frequency of Occurrence, to serve as a Basis for an Earthquake Map of the Three Kingdoms (Yorkshire in 1738, 1817, 1869). *Trans. Roy. Irish Acad.*, vol. xxviii., pp. 285-316.
- 58 OSWALD, S.—On a Perched Block of Sandstone in Lunedale [near Middleton-on-Tees]. *Trans. Northumberland Durham Nat. Hist. Soc.*, vol. viii., pp. 181-184.
- 59 OWEN, R.—A History of British Fossil Reptiles. [Lias, Whitby]. Vol. iii., pp. 12, 73, 78, 130. 4 vols. 4to. *London*.

- 60 PAGE, D.—Report on an Outbreak of Enteric Fever in Beverley, and on the general sanitary condition of the Borough. (No. 1). Pp. 18. *Local Government Board Report*. Fol. London.
- 61 PARKIN, C.—The Mineral Resources of the Rosedale Abbey District. *Trans. North of Eng. Min. and Mech. Eng.*, vol. xxxii., p. 43.
- 62 PHILLIPS, J. A.—A Treatise on Ore Deposits. [Yorkshire, pp. 165-169, 173, 174, 182, 190-192]. Pp. xvi.+651. 8vo. London.
- 63 REID, C.—Dust and Soils. [Yorkshire Moors]. *Geol. Mag.*, dec. iii., vol. i., pp. 165-169.
- 64 R[OEBUCK], W. D. and C[LARKE], W. E.—Yorkshire Naturalists' Union, Sherburn [Geological notes on]. *Naturalist*, July, pp. 216-220.
- 65 SILVERTHORNE, A.—London and Provincial Water Supplies, with the latest Statistics of Metropolitan and Provincial Water Works. 8vo. London. Ed. 1, 1856.
- 66 SIMPSON, M.—The Fossils of the Yorkshire Lias, described from Nature; with a carefully measured section of the strata, and the fossils peculiar to each. 12mo. *Whitby and London*. Ed. 1, 1855.
- 67 SMITH, WILLIAM.—Old Yorkshire [includes an account of Lake Dwellings in Yorkshire]. Pp. xxiv.+334.
- 68 STOLTERFORTH, H.—Microscopic Examination of Crummack Lake Deposit. *Naturalist*, vol. x., Oct. 1884, p. 66.
- 69 TEALL, J. J. H.—Petrological Notes on some North-of-England Dykes. *Quart. Journ. Geol. Soc.*, vol. xl., pp. 209-247; *Geol. Mag.*, dec. iii., vol. i., p. 92.
- 70 TIFFEN, J. H.—Prize Essay on the Agriculture of East and North-Riding of Yorkshire. *North British Agriculturist*, vol. xxxvi., pp. 773-738; *The Field*, March 14th, 1885, vol. lxx., p. 348.
- 71 TUTE, J. S.—On the Sequence of the Permian Rocks, near Ripon. *Proc. Yorks. Geol. Soc.* for 1883, vol. viii., pt. 2, pp. 218-220.
- 72 ——— Some Indications of a Raised Beach at Redcar *Proc. Yorks. Geol. Soc.*, vol. viii., pt. 2, p. 220.
- 73 VEITCH, W. Y.—On the Raised Beaches on the N.E. Coast of Yorkshire. *Ibid.*, pp. 221-226.

- 74 VINE, G. R.—Notes on the Carboniferous Polyzoa of West Yorkshire and Derbyshire. [An attempt to identify Phillips' species]. *Proc. Yorks. Geol. Soc.*, pp. 161-174.
- 75 — Notes on the Carboniferous Entomostraca and Foraminifera of the North Yorkshire Shales. *Ibid.*, pp. 226-239.
- 76 — Micro-Palæontology of the Northern Carboniferous Shales. *Naturalist*, vol. x., pp. 37-40, 61-66, 97-103, 1884. Vol. xi., pp. 207-212, 313-319, 367-378, 1885.
- 77 WATERS, A. H.—The Red Chalk and its Fossils. [Speeton]. *Naturalist's World*, vol. i., pp. 128-130, 147-149, 178.
- 78 WILD, GEORGE.—Sigillaria ('Pot-holes') and their Detection in the Roof of a Coal Seam by their Stigmarian Roots. *Trans. Manch. Geol. Soc.*, 1883-4, vol. xvii., pp. 215-224.
- 79 WILLIAMSON, W. C.—Presidential Address to the Geological Section of the British Association at Southport. *Rep. Brit. Assoc. for 1883*, pp. 475-489.
- 80 — On some supposed Fossil Algæ from Carboniferous Rocks. [Banks of the Hodder]. *Ibid.*, p. 493.
- 81 WOODWARD, H.—Note on the Synonymy of *Phillipsia gemmulifera*, Phil. sp., 1836, a Carboniferous Trilobite. *Geol. Mag.*, dec. iii., vol. i., pp. 22, 23.
- 82 — A Monograph of British Carboniferous Trilobites. Pt. ii., pp. 39-86. [See 1883].
- 83 — Synopsis of the Genera and Species of Carboniferous Limestone Trilobites. *Geol. Mag.*, dec. iii., vol. i., pp. 484-489. [See 1883].
- 84 — A Monograph of the British Carboniferous Trilobites [*Phillipsia laticaudata* from Bolland, p. 43]. Pp. 39-86; plates vii.-x. *Monogr. Pal. Soc.*, vol. xxxviii., for the year 1884.
- 85 WRIGHT, T.—Monograph on the Lias Ammonites of the British Islands. Pt. 7, Description of Species. [Yorkshire, pp. 441, 443, 446, 447, 449, 452, 476, 477, 478]. Pp. 441-480; plates lxxviii.-lxxxvii. *Monogr. Pal. Soc.*, vol. xxxviii., for the year 1884.
- 86 — The Antiquities of the Town of Halifax in Yorkshire. [Reprint: see under 1738].

1885.

- 1 ANON.—The East Riding of Yorkshire [lengthy notice of of Mr. Tiffen's Essay. See 1884]. *The Field*, March 14, p. 348.
- 2 ——— Reports of the Inspectors of Mines. *Parliamentary Report*. Fol. London.
- 3 ABEL, F.—Explosions in Coal Mines. Address to the Society of Arts. *Nature*, vol. xxxiii., pp. 108-112, 138-142. *Journ. Society Arts.*, vol. xxxiv., Nov. 20th, 1885, pp. 6-30. 1886.
- 4 ADAMSON, S. A.—Report of Field Excursions—Guiseley and Menston, W. CHEETHAM, p. 27; Idle and Thackley, W. CHEETHAM, p. 28; Wrose Hill and District, T. TATE, pp. 29, 30; Hawes, W. CHEETHAM, pp. 30-32; Norber, B. HOLGATE, 32-34; Pateley Bridge, B. HOLGATE, pp. 34, 36; Ingleton, W. CHEETHAM, pp. 37, 38; Brimham Rocks, pp. 38, 39; Keighley Moors, pp. 39-41; Barnsley, pp. 42, 43. *Trans. Leeds Geol. Assoc.*, 1885.
- 5 ——— The Yorkshire Naturalists at Anston Stones. Pp. 260 262; Boroughbridge, pp. 279-281; Pocklington, pp. 307-309; Whitby, pp. 348-350; Blubberhouses, pp. 379-382. *Naturalist*, vol. x. See also *Trans. Leeds Geol. Assoc.*, part 3, 1886-7, pp. 154-160.
- 6 AIRY, H.—Report to the Local Government Board on a Prevalence of Typhoid Fever in York. [Soils, Analysis of water, p. 6]. (No. 4). Pp. 12. *Local Government Board Report*. Fol. London.
- 7 ATKINSON, D. H.—Ralph Thoresby the Topographer: His Town and Times. [History of Harrogate Springs]. 2 vols. 8vo. Leeds.
- 8 BARROW, G.—[See C. Fox-Strangways].
- 9 BLAKE, J. F.—Report of Sub-Committee on Permian, Triassic and Jurassic. *International Geological Congress* (English Committee), pp. 95-105.
- 10 BROCKLEHURST, G. H.—A Visit to Whitby and its neighbourhood. *Nat. World*, vol. ii., pp. 11, 12.
- 11 CARTER, R.—On the Mineral Wells at Harrogate. *Proc. Yorks. Geol. Soc.* for 1884, vol. viii., pt. 3, pp. 313-319.
- 12 CASH, W.—[See T. Hick].

- 13 CHADWICK, S.—*Inoceramus involutus* Sow. at Ganton Wold. *Naturalist*, vol. x., p. 258.
- 14 ——— Geological Report. [Chalk Fossils from Thixendale]. *Ann. Rep. Malton Nat. Soc.* for 1884-5, pp. 37-40.
- 15 CHEETHAM, W.—[See S. A. Adamson].
- 16 CLARKE, W. EAGLE.—[See W. Denison Roebuck].
- 17 DAKYNS, J. R., and C. FOX-STRANGWAYS.—The Geology of Bridlington Bay. Explanation of Quarter Sheet, 94 N.E. (N.S. 65). *Memoirs of the Geological Survey*. Pp. 18. 8vo. London.
- 18 DAVIS, J. W.—Report of the Committee to assist in the Exploration of the Raygill Fissure in Lothersdale, Yorkshire. *Rep. Brit. Assoc.* for 1884, p. 240.
- 19 DAVIS, R. H.—The Mineral Wealth of Harrogate. *Proc. Yorks. Geol. Soc.* for 1884, vol. viii., pt. 3, pp. 357-366.
- 20 DAWKINS, W. BOYD.—On the Carboniferous Flora. *Trans. Manch. Geol. Soc.*, vol. 18, pt. 5, pp. 101-113.
- 21 DOBREE, N. F.—Mammalian Remains at Kelsey Hill, Holderness. *Naturalist*, Nov., vol. x., p. 378.
- 22 ——— Large Ammonite at Hessle [an error, should be 'opposite' Hessle, viz., in Lincs.]. *Naturalist*, Nov., p. 378.
- 23 DONALD, Miss J.—Notes on some Carboniferous Gasteropoda from Penton and elsewhere. *Trans. Cumb. Westm. Assoc.*, No. 9, p. 127.
- 24 ETHERIDGE, R.—Manual of Geology, Theoretical and Practical, by John Phillips. Part 2. Stratigraphical Geology and Palæontology. [Yorkshire, pp. 223, 359, 364, 376, 394, 397, 460, 482, 565]. Pp. xxiv.+712. 8vo. London.
- 25 EVANS, T. M.—The Ancient Britons and the Lake Dwellings at Ulrome in Holderness. *The Hull Quarterly*, vol. ii., No. 1, pp. 27-32, and vol. ii., No. 2, pp. 57-61. Also separately. *Hull*. 12mo. Pp. 28.
- 26 FOORD, A. H.—[See H. A. Nicholson].
- 27 FOX-STRANGWAYS, C.—The Harrogate Wells, or the Mineral Waters of Harrogate geologically considered. *Proc. Yorks. Geol. Soc.*, vol. viii., pt. 3, pp. 319-335.
- 28 ——— [See J. R. Dakyns].
- 29 ———, C. REID and G. BARROW.—The Geology of Eskdale, Rosedale, etc. Explanation of Quarter Sheet, 96 N.E.

- (N.S. 43). *Memoirs of the Geological Survey*. Pp. 65. 8vo. London.
- 30 GEIKIE, A.—Textbook of Geology. [Yorkshire, pp. 737, 789, 795, 797, 823, 903, etc.]. Ed. 2. Pp. 992. 8vo. London. [See 1882].
- 31 GEORGE, T. J.—[See B. Thompson].
- 32 GILL, W. H.—Speeton Cliffs to Gristhorpe Bay. *Trans. Leeds Geol. Assoc.*, pt. 1, p. 21.
- 33 ——— Iron Ore from Allotment Gardens at Stourton. *Ibid.*, p. 7.
- 34 HARKER, A.—The Oolites of the Cave District. *Naturalist*, May, pp. 229-232.
- 35 HICK, T., and W. CASH.—A Contribution to the Flora of the Lower Coal Measures of the Parish of Halifax—Part 4. *Proc. Yorks. Geol. Soc.*, vol. viii., pt. 3, pp. 370-377. See 1882.
- 36 HOLGATE, B.—On the Geology of Leeds. (Abstract) *Trans. Leeds Geol. Assoc.*, pt. 1, pp. 5, 6.
- 37 ——— On Geology of the Nidd Valley. *Trans. Leeds Geol. Assoc.*, pp. 35-36.
- 38 ——— [See S. A. Adamson].
- 39 HUDLESTON, W. H.—The Geology of Malton and neighbourhood, being the Presidential Address delivered before the Malton Field Naturalists' and Scientific Society . . . November 18th, 1884. *2nd Ann. Rep. Malton Nat. Soc.* for 1884-5, pp. 5-30.
- 40 ——— Report of Sub-Committee on Permian, Triassic, and Jurassic. *Internat. Geol. Congress* (English Committee). Pp. 63-93.
- 41 ——— Contributions to the Palæontology of the Yorkshire Oolites. *Geol. Mag.*, Dec. 3, vol. ii., pp. 49-54, 121-129, 151-159, 201-207, 252-257. [See 1880].
- 42 IRVING, A.—Report of Sub-Committee on Permian, Triassic, and Jurassic. *Internat. Geol. Congress* (English Committee), pp. 107-120.
- 43 JONES, T. R., and J. W. KIRKBY.—Notes on the Palæozoic Bivalved Entomostraca. No. 19, On some Carboniferous Species of the Ostracodons Genus *Kirkbya* Jones. [Yorkshire species]. *Ann. Mag. Nat. Hist.*, ser. 5, vol. xv., pp. 174-191. *Geol. Mag.*, dec. iii., vol. ii., pp. 535-541.



- 44 JUKES-BROWNE, A. J.—The Boulder-Clays of Lincolnshire. Their Geographical Range and Relative Age. [Comparison with Yorkshire, p. 131]. *Quart. Journ. Geol. Soc.*, vol. xli., pp. 114-132; *Nature*, vol. xxxi., p. 402; *Geol. Mag.*, dec. iii., vol. ii., pp. 135-137.
- 45 KIDSTON, R.—On the Relationship of *Ulodendron* L. and H. to *Lepidodendron* Sternberg; *Bothrodendron* L. and H.; *Sigillaria* Brongniart; and *Rhytidodendron* Boulay [Yorkshire species]. *Ann. Mag. Nat. Hist.*, ser. 5, vol. xvi., pp. 239-260.
- 46 KIRKBY, J. W.—[See T. Rupert Jones].
- 47 LATCHMORE, J.—[See William Wheeler].
- 48 LEAN, W. S., J. LOVELL, and others. Recent Earthquakes. *Nature*, vol. xxxii., pp. 175-176. *Hull Express*, June 19th and 20th; *Leeds Mercury*, and other local papers.
- 49 LEBOUR, G. A.—On some Recent Earthquakes on the Durham Coast and their Probable Causes. [Middlesbrough]. *Geol. Mag.*, dec. iii., vol. ii., pp. 513-515; *Rep. Brit. Assoc.* for 1885, pp. 1013-1015; *Nature*, vol. xxxii., p. 559.
- 50 LISTER, J.—[See William Wheeler].
- 51 LOVELL, J.—[See W. S. Lean].
- 52 LUCAS, J.—[See William Wheeler].
- 53 LUND, P.—Calcareous Jottings. [Craven]. *Naturalist's World*, vol. ii., pp. 8-10.
- 54 LYDEKKER, R.—Catalogue of the Fossil Mammalia in the British Museum (Natural History). Pt. 1-4. 8vo. *London*, 1885-87.
- 55 MIALL, L. C.—On a Megalichthys from the Yorkshire Coalfield. [Halifax Hard Bed, near Idle]. *Naturalist*, vol. x., pp. 121-124.
- 56 ——— Description of the Remains of Megalichthys in the Leeds Museum. 8vo., pp. 16.
- 57 NICHOLSON, H. A., and A. H. FOORD.—On the Genus *Fistulipora* M'Coy, with Description of several Species. [*F. incrustans* from Bolland, p. 505]. *Ann. Mag. Nat. Hist.*, ser. 5, vol. xvi., pp. 496-517.
- 58 OLIVER, G.—The Mineral Springs of the Grand Anticlinal of the West Riding; a few Chemico-Geological Notes.

- Proc. Yorks. Geol. Soc.* for 1884, vol. viii., pt. 3, pp. 336-356.
- 59 OWEN, R. [of Indiana].—British Earthquakes and their Seismic Relations. [Doncaster Earthquakes of March 1st, 1792]. *Proc. Amer. Assoc. Adv. Sci.* for 1884, pp. 438-443.
- 60 PHILLIPS, JOHN.—[See H. G. Seeley].
- 61 ——— [See R. Etheridge].
- 62 REID, C.—The Geology of Holderness and the adjoining parts of Yorkshire and Lincolnshire. *Memoirs of the Geological Survey*. Pp. 177. 8vo. London. [See notices in *Geol. Mag.*, Feb., 1886, p. 85; *Naturalist*, 1886, p. 86.
- 63 ——— [See C. Fox-Strangways].
- 64 ROEBUCK, W. DENISON, and W. EAGLE CLARKE.—Bibliography of 1884. Pt. viii. Geology and Palæontology. *Naturalist*, Dec., pp. 394-406.
- 65 SALTER, S. J. A.—Marble. [Derbyshire and Yorkshire]. *Notes and Queries*, ser. 6, vol. xi., March 14th, 1885, pp. 202.
- 66 SEELEY, H. G.—Manual of Geology (Theoretical and Practical), by John Phillips. Pt. 1, Physical Geology and Palæontology. Pp. xiii.+546. 8vo. London.
- 67 STEVENSON, A. S.—Address to the Members of the Tyneside Naturalists' Field Club. [Excursion to Settle, pp. 227-231]. *Trans. Northumberland Durham Nat. Hist. Soc.*, vol. viii., pt. 2, pp. 225-247.
- 68 STOCKS, H. B.—On the Composition of Coal Balls and Baum Pots in the Lower Coal Measures. *Proc. Yorks. Geol. Soc.*, vol. viii., pt. 3, pp. 393-395.
- 69 SWEETING, R. D. R.—Report to the Local Government Board on the Prevalence of Diphtheria in the Whixley Sub-district of the Great Ouseburn Registration District. (No. 9). Pp. 6. *Local Government Board Report*. Fol. London.
- 70 TATE, T.—[See S. A. Adamson].
- 71 TAYLOR, J. E.—Our Common British Fossils and where to find them. A Handbook for Students. [Many Yorkshire specimens]. Pp. xii.+331. 8vo. London.

- 72 THOMPSON, B., and T. J. GEORGE.—A Catalogue of the Geological Collection in the Northampton Museum. Pt. 3, The Carboniferous System. [*Woodocrinus macrodactylus*, from Swaledale]. *Journ. Northampton Nat. Hist. Soc.*, vol. iii., pp. 240-245.
- 73 VINE, G. R.—Fifth and Last Report of the Committee . . . on Fossil Polyzoa. [Bibliography]. *Rep. Brit. Assoc. for 1884*, pp. 97-219.
- 74 ——— Further Notes on New Species and other Yorkshire Carboniferous Fossil Polyzoa described by Prof. John Phillips. *Proc. Yorks. Geol. Soc.*, vol. viii., pt. 3, pp. 377-393.
- 75 ——— Micro-Palæontology of the Northern Carboniferous Shales. *Naturalist*, pp. 207-212, 313-320, 367-378. [See also 1884].
- 76 WETHERED, E.—On the Structure and Origin of Carboniferous Coal Seams. [Section of Better Bed Coal at Low Moor, p. 412]. *Journ. Roy. Mic. Soc.*, vol. v., pt. 1, pp. 406-420.
- 77 WHEATER, WILLIAM.—Old Yorkshire [includes chapter on Dowkerbottom Cave, by J. LATCHMORE; Kirkdale Cave, Grassington Lead Mines, by J. LUCAS; The Gipsy Springs, Coal Mining in Halifax, by J. LISTER]. Pp. x.+324.
- 78 WHITELEY, R. L.—Analysis of the Kissingen Saline Chalybeate Water, 1883 [Harrogate], as compared with analyses in 1845, 1867, and 1879. *Journ. Roy. Mic. Soc.*, vol. v., pt. 1, pp. 366-370.
- 79 WHITING, CHAS. S.—Changes in Land and Sea [Yorks.]. *The Hull Quarterly and East Riding Portfolio*, vol. ii., No. 2, April, pp. 129-132.
- 80 WILLIAMSON, W. C.—Biographical Notices of Eminent Yorkshire Geologists. 3, John Williamson. *Proc. Yorks. Geol. Soc.*, vol. viii., pt. 3, pp. 295-313.
- 81 ——— On some undescribed tracks of Invertebrate Animals from the Carboniferous rocks and on some inorganic phenomena, simulating plant remains, produced on tidal shores. [Yoredale rocks, near Hawes]. *Proc. Manchester Lit. Phil. Soc.*, vol. xxiv., pp. 37, 38.
- 82 WOODWARD, A. S.—On the Literature and Nomenclature of British Fossil Crocodilia. [Whitby, p. 498]. *Geol. Mag.*, dec. iii., vol. ii., pp. 496-510.

- 83 WOODWARD, H. B.—Report of the Sub-Committee on Recent and Tertiary. *Internat. Geol. Congress* (English Committee), pp. 1-21.
- 84 YEO, J. B.—Climate and Health Resorts. [Harrogate, pp. 631, 632]. Pp. xv., 660. 8vo. London. (A new edition of Health Resorts and their Uses. Pp. xi., 316, 1882). Ed. 3. Pp. xiv., 674. 1890.

1886.

- 1 ANON.—Cave-hunting in Yorkshire. *Chambers' Journ.*, ser. 5, vol. iii., pp. 657-660.
- 2 ——— A Post-glacial Forest in Hull. *Sci. Goss.*, Sep., vol. xxii., No. 261, pp. 214, 215.
- 3 ——— The Clayton Fossil. *Naturalist*, Nov., p. 348.
- 4 ——— Reports of the Inspectors of Mines. *Parliamentary Report*. Fol. London.
- 5 ADAMSON, S. A.—Recent Discoveries of Carboniferous Vegetation in Yorkshire. [Clayton and Ilkley]. *Trans. Leeds Geol. Assoc.*, pt. 2, pp. 71-75. Under different titles in *Naturalist*, 1886, pp. 252, 284, 309, 316, 336, 348.
- 6 ——— Reports of Excursions to Hunslet (Leeds Lower Coal Measures), B. HOLGATE. pp. 77-80; to Draughton, J. E. BEDFORD, pp. 80, 81; to Bingley, C. D. HARDCASTLE; pp. 82, 83; Shibden Valley, J. SPENCER, pp. 83-85; to Wensleydale, W. HORNE, pp. 85-87; to Crummockdale, J. E. BEDFORD, pp. 87, 88; to the 'Hitchingstone,' Keighley Moors, pp. 88, 90. *Trans. Leeds Geol. Assoc.*, pt. 2, 1885-86. [See also *Naturalist*, pp. 333-336].
- 7 ——— The Yorkshire Naturalists' Union at Askern, p. 190; at Flamborough Head, pp. 217, 218; in Upper Nidderdale, pp. 254, 255; at Pickering, pp. 274, 275. *Naturalist*. [See also *Trans. Leeds Geol. Assoc.*, pt. 3, 1886-7, pp. 160-168].
- 8 ——— Remarkable Geological Discovery at Clayton, etc. *Naturalist*, pp. 252, 284, 309, 336, 348, 628, 629.
- 9 ——— The 'Hitchingstone,' Keighley Moor. *Naturalist*, Nov., pp. 333-336.
- 10 ——— and A. HARKER.—Bibliography . . . North of England. Geology and Palæontology, 1885. *Naturalist*, Nov.-Dec., pp. 349-362.

- 11 BAILEY, M.—The Rocks at Flamborough. *Naturalist*, 1885, p. 347.
- 12 BARROW, G.—[See C. Fox-Strangways].
- 13 BEDFORD, J. E.—[See S. A. Adamson].
- 14 BELL, A.—The Succession of the Later Tertiaries in Great Britain. *Geol. Mag.*, dec. iii., vol. iii., pp. 67-78.
- 15 BENNIE, J., and R. KIDSTON.—On the Occurrence of Spores in the Carboniferous Formation of Scotland. [Macrospores from Halifax, described by W. C. WILLIAMSON, p. 85]. *Proc. Roy. Soc., Edinburgh*, vol. ix., pp. 82-117.
- 16 BROWNE, A. J. JUKES.—[See A. J. Jukes-Browne].
- 17 BURN, D.—Discovery of the Remains of Extinct Animals in Westmorland [and Cumberland, also at Sedburgh]. *Sci. Goss.*, p. 166.
- 18 CAMERON, A. C. G.—[See J. R. Dakyns].
- 19 ——— [See C. Fox-Strangways].
- 20 CARTER, J.—On the Decapod Crustaceans of the Oxford Clay. [Yorkshire species]. *Quart. Journ. Geol. Soc.*, vol. xlii., pp. 542-559.
- 21 CHADWICK, S.—Geological Report to the Malton Scientific Society. [List of Fossils from the district]. *Ann. Rep. Malton Nat. Soc.*, 1885-6, pp. 5-8.
- 22 ——— *Asteracanthus ornatissimus* in the Middle Oolite, near Malton. *Naturalist*, p. 102; *Ann. Rep. Malton Nat. Soc.*, p. 6.
- 23 COCKERELL, THEO. D. A.—Palæontological Notes from the British Museum Collections [Yorkshire fossil fishes, shells and echinoderms]. *Naturalist*, March, p. 81.
- 24 COLE, E. M.—Notes on the Geology of the Hull, Barnsley, and West Riding Railway and Dock. Pp. 60. 8vo. *Hull*. [See *Naturalist*, June, p. 191].
- 25 ——— On some Sections at Cave and Drewton. *Proc. Yorks. Geol. Soc.*, vol. ix., pt. 1, pp. 49-52.
- 26 ——— On the Physical Geography and Geology of the East Riding of Yorkshire. *Ibid.*, pp. 113-123.
- 27 DAKYNS, J. R., and C. FOX-STRANGWAYS.—The Geology of the country around Driffield. Explanation of Quarter Sheet 94 N.W. (N.S. 64). *Memoirs of the Geological Survey*. Pp. vi.+24. 8vo. *London*.

- 28 DAKYNS, J. R., C. FOX-STRANGWAYS, and A. C. G. CAMERON.—The Geology of the country between York and Hull. Explanation of Quarter Sheets 93 S.E., 94 S.W., and part of 86. (N.S. 71, 72, and parts of 79, 80). *Memoirs of the Geological Survey*. Pp. vi.+54. 8vo. London.
- 29 DAVIS, J. W.—On the Contortions in the Chalk at Flamborough Head. *Proc. Yorks. Geol. Soc.*, vol. ix., pt. I, pp. 43-49.
- 30 ——— Notes on a Collection of Fossil Fish-Remains from the Mountain Limestone of Derbyshire [Compared with those from Wensleydale]. *Geol. Mag.*, dec. iii., vol. iii., pp. 148-157.
- 31 DAWKINS, W. BOYD.—On the Geography of Britain in the Carboniferous Period. *Trans. Manch. Geol. Soc.*, vol. xix., pp. 37-47.
- 32 DE RANCE, C. E.—Eleventh Report . . . Underground Waters . . . [Goole, Rawcliffe, Snaith, Selby, pp. 383-390, 394]. *Rep. Brit. Assoc. for 1885*, pp. 380-396.
- 33 ETHERIDGE, R., Jun., and P. H. CARPENTER.—Catalogue of the Blastoidea in the Geological Department of the British Museum (Natural History). [Yorkshire, pp. 186, 187, 249, 251, 252, 255, 270, 277, 292, 294, 300]. Pp. xv., 322, plates xx. 4to. London.
- 34 FOX, H.—Strontium and its Minerals. [Note of its occurrence in Yorkshire, p. 64]. *Trans. Liverpool Geol. Assoc.*, vol. vi., 1885-86, pp. 62-66.
- 35 FOX-STRANGWAYS, C., A. C. G. CAMERON, and G. BARROW.—The Geology of the Country around Northallerton and Thirsk. Explanation of Quarter Sheets 96 N.W. and 96 S.W. (N.S. 42 and 52). *Memoirs of the Geological Survey*. Pp. 75. 8vo. London.
- 36 ——— [See J. R. Dakyns].
- 37 GALLOWAY, W. B.—The Chalk and Flint Formation ; its origin in harmony with a very ancient and scientific modern theory of the world illustrated by facts and specimens. Pp. 44. 8vo. London.
- 38 GARDNER, J. STARKIE.—On Mesozoic Angiosperms [Williamsonia]. *Geol. Mag.*, dec. iii., vol. iii., pp. 193-204, 342-345. [See also vol. vi., 1889, p. 144].

- 39 GOMME, GEORGE LAWRENCE [edited by].—Archæology, part 1 (includes references to remains of extinct mam-malia, etc., found in Yorkshire). Pp. xx. + 335. Pt. 2, [Devil's Arrows, etc.], pp. xvi. + 342.
- 40 GREEN, A. H.—On the Drift of the North of England. *Trans. Leeds Geol. Assoc.*, 1885-6. Pt. 2. Pp. 64-66.
- 41 GRESLEY, W. S.—A Fossil Tree at Clayton, Yorkshire. *Midl. Nat.*, vol. ix., pp. 229-232.
- 42 HARDCASTLE, C. D.—Notes on Metamorphic Rocks. (Ab-stract). [Sandstones, near Leeds, etc.]. *Trans. Leeds Geol. Assoc.*, Pt. 2, 1885-6, pp. 62-64.
- 43 ——— Inaugural Address to Leeds Geol. Assoc. (Abstract). [Geology of the Ingleton district]. *Ibid.*, pp. 66-69.
- 44 ——— [See S. A. Adamson].
- 45 HARKER, A.—Jointing in the Mountain Limestone of the Austwick District. *Naturalist*, April, p. 102.
- 46 ——— Joints cutting through Pebbles. [Norber]. *Ibid.*, p. 102.
- 47 ——— [See S. A. Adamson].
- 48 HEMINGWAY, W.—Notes on the Mineralogy of Barnsley. *Trans. Barnsley Nat. Hist. Soc.*, 1885-86, vol. v., pp. 3-7.
- 49 HEY, W. C.—Flamborough Head. [Denudation of the Cliffs]. *Naturalist*, 1886, p. 161.
- 50 HOLGATE, B.—On the Leeds Lower Coal-Measures. (Ab-stract). *Trans. Leeds Geol. Assoc.* Pt. 2, 1886, pp. 49, 50, 77-80.
- 51 ——— [See S. A. Adamson].
- 52 HORNE, W.—[See S. A. Adamson].
- 53 HUGHES, T. MCK.—On some Perched Blocks and associated Phenomena. [Norber Brow, etc.]. *Quart. Journ. Geol. Soc.*, vol. xlii., pp. 527-539.; *Geol. Mag.*, dec. iii., vol. iii., pp. 375, 376.
- 54 JONES, T. R.—Notes on the Palæozoic Bivalved Entomo-straca. No. 22. On some undescribed Species of British Carboniferous Ostracoda. [*Argillæcia æqualis*, from Grassington, p. 264]. *Ann. Mag. Nat. Hist.*, vol. xviii., pp. 249-269.
- 55 ——— and J. W. KIRKBY.—Notes on the Distribution of the Ostracoda of the Carboniferous Formations of the

- British Isles. *Quart. Journ. Geol. Soc.*, vol. xlii., pp. 496-514.
- 56 JUDD, J. W.—On the Relation between Solution planes of Crystals and those of Secondary Twinning; and on the Mode of Development of Negative Crystals along the former. A Contribution to the Theory of Schillerization. [Solution planes of Augite in the Whin Sill, p. 87]. *Min. Mag.*, Dec., vol. vii., pp. 81-92.
- 57 JUKES-BROWNE, A. J.—On the Application of the term Neocomian. *Geol. Mag.*, dec. iii., vol. iii., pp. 311-319.
- 58 ——— The Students' Handbook of Geological History. 8vo. pp. xi. + 597.
- 59 KENDALL, J. D.—The Iron Ores of the English Secondary Rocks. [Mostly Yorkshire]. *Trans. N. Eng. Inst. Eng.*, vol. xxxv., pp. 105-157. Map and sections.
- 60 KENDALL, PERCY F.—On the Carboniferous Volcanoes of Great Britain. *Trans. Manch. Geol. Soc.*, vol. xix., pts. 6 and 7, pp. 133-151.
- 61 KIDSTON, R.—Catalogue of the Palæozoic Plants in the Department of Geology and Palæontology, British Museum (Natural History). [Many Yorkshire species]. Pp. viii. + 288. 8vo. *London*.
- 62 ——— [See James Bennie].
- 63 KIRBY, J. W.—[See T. R. Jones].
- 64 KONINCK, L. G. DE and M. LOHEST.—Notice sur le Parallélisme entre le calcaire Carbonifère du nord ouest de l'Angleterre et celui de la Belgique. [Compares the Ingleborough beds with those of Belgium]. *Bull. Acad. Roy. Belg.*, ser. 3, tom. xi., No. 6; *Geol. Mag.*, dec. iii., pp. 463-464. [See also under 1887].
- 65 KROPF, L. L.—Spurn Head. [Noticing Saxton's Map of Yorkshire, 1577]. *Naturalist*, p. 279.
- 66 LAMPLUGH, G. W.—On Glacial Shell-beds in British Columbia. [Resemble those at Bridlington]. *Quart. Journ. Geol. Soc.*, vol. xlii., pp. 276-286.
- 67 LEBOUR, G. A.—Outlines of the Geology of Northumberland and Durham. [Cleveland, pp. 86, 142-145]. Ed. 2. 8vo. *Newcastle*. Ed. 1. 1878. [See *Naturalist*, 1887, p. 288.



- 68 LEWIS, H. CARVILL.—Comparative Studies upon the Glaciation of North America, Great Britain, and Ireland. [Skipton, Whitby]. *Nature*, vol. xxxv., Nov. 25th, 1886, pp. 89-91; *Rep. Brit. Assoc. for 1886*, pp. 632-635, 1887.
- 69 LOHEST, M.—[See L. G. de Koninck].
- 70 LOVETT, E.—Notes on the Glacial Deposits and other interesting Geological Features of North [West and North East] Yorkshire. *Proc. and Trans. Croydon Mic. and N. H. Club*, vol. iii., pp. 37-39.
- 71 LYDEKKER, R. [See 1885].
- 72 MADISON, J.—[Exhibit of Fossils from Clitheroe District]. *Midland Nat.*, May, vol. ix., p. 143.
- 73 MELDOLA, R.—The Great Essex Earthquake of the 22nd of April, 1884. [Felt as far as Leeds]. *Trans. Herts. Nat. Hist. Soc.*, vol. iv., pt. 1, pp. 23-32.
- 74 MORTIMER, J. R.—On the origin of the Chalk Dales of Yorkshire. *Proc. Yorks. Geol. Soc.*, vol. ix., pt. 1, pp. 29-42.
- 75 PHILLIPSON, G. H.—Address to the Members of the Tyne-side Naturalists' Field Club. [Notes at Leyburn, Loftus, Staithes]. *Trans. Northumberland, Durham Nat. Hist. Soc.*, vol. viii., pt. 2, pp. 278-295.
- 76 PRESTWICH, J.—Geology. Vol. i., Chemical and Physical [Cleveland Ironstone, pp. 355, 356]. Pp. xxiv.+477. 8vo. *Oxford*. Vol. ii., 1888.
- 77 ————On Underground Temperatures; with observations on the Conductivity of Rocks; on the Thermal Effects of Saturation and Imbibition; and on a Special Source of Heat in Mountain Ranges. [Bradford, p. 82; Scarborough, p. 84; Barnsley and Wakefield, p. 92]. *Proc. Roy. Soc.*, vol. xli., pp. 1-116.
- 78 PURNELL, T. B.—Bottled Sunshine [figures the Clayton fossil tree]. *Exeter*, 8 pp., [n.d. ? 1886].
- 79 READE, T. M.—The Origin of Mountain Ranges considered experimentally, structurally, dynamically, and in relation to their Geological History. [Yorkshire, pp. 32, 106, 177-179, 218]. Pp. xviii.+359. 8vo. *London*.
- 80 RIPON, MARQUIS OF.—Address to the Yorkshire Geological Society. *Proc. Yorks. Geol. Soc.*, vol. ix., pt. pp. 1-9.
- 81 SPENCER, J.—[See S. A. Adamson].

- 82 STEVENSON, W.—A Post-Glacial Forest in Hull. *Eastern Morning News*, Aug.; *Sci. Goss.*, Sept. p. 214.
- 83 STOCKS, H. B.—Analysis of a Hydraulic Limestone Concretion from the Yorkshire Coast. *Proc. Yorks. Geol. Soc.*, vol. ix., pt. 1, pp. 55, 56.
- 84 STRAHAN, A.—Notes on the Relations of the Lincolnshire Carstone. [Comparison with Yorkshire]. *Quart. Journ. Geol. Soc.*, vol. xlii., pp. 486-493.
- 85 TEALL, J. J. H.—British Petrography. Pts. 1-10, plates i.-xx., 4to, Feb.-Nov. *Birmingham*.
- 86 ——— British Petrography, with special reference to the Igneous Rocks. 4to. *London*.
- 87 TUTE, J. S.—Note on *Spirangium carbonarium* Schimper. *Proc. Yorks. Geol. Soc.* for 1885, vol. ix., pt. 1, p. 53.
- 88 VEITCH, W; Y.—Three new Species [Mollusca] observed in the Yorkshire Lias. *Proc. Yorks. Geol. Soc.*, vol. ix., pt. 1, p. 54.; *Nat. World*, vol. iii., May, p. 98.
- 89 VERNON-HARCOURT, L. F.—The River Seine. [The Ribble and the Humber noted in discussion]. *Proc. Inst. Civ. Eng.*, vol. lxxxiv., pp. 210-257, Discussion, pp. 258-359.
- 90 VINE, G. R.—Notes on the Yoredale Polyzoa of North Lancashire [and Yorkshire]. *Proc. Yorks. Geol. Soc.*, vol. ix., pt. 1, pp. 70-98.
- 91 WALTON, F. F.—Geology of the District between Market Weighton and the Humber. Pp. 24. 8vo. *Hull*. [See *Naturalist*, March, 1887, p. 88].
- 92 WARD, T.—On Rock Salt. [Middlesbrough]. *Trans. Manchester Geol. Soc.*, vol. xviii., pt. 15, pp. 396-419.
- 93 WHITAKER, W.—Chronological List of Works on the Coast changes and Shore Deposits of England and Wales. *Rep. Brit. Assoc.* for 1885. Pp. 442-465.
- 94 WILDRIDGE, T. TINDALL.—Holderness and Hullshire Gleanings [records of boring at Hedon, etc.] 4to, pp. xii. + 143.
- 95 WILLIAMSON, W. C.—[See James Bennie].
- 96 WOODWARD, A. S.—On the Palæontology of the Selachian Genus *Notidanus* Cuvier, etc. [Yorkshire, pp. 208, 212, 259]. *Geol. Mag.*, dec. iii., vol. iii., pp. 205-217, 253-259, 525, 526.

97. WRIGHT, T.—Monograph of the Lias Ammonites of the British Islands. [*Amaltheus lenticularis*, from Yorkshire, pp. 482, 483]. Pp. 481-503; plate lxxxviii.; *Monogr. Pal. Soc.*, vol. xxxix., for the year 1885.

1887.

- 1 ANON.—Reports of the Inspectors of Mines. *Parliamentary Report*. Fol. London.
- 2 ——— Yorkshire Waterfalls and Caves. [Settle and Ingleborough]. *Yorkshire Notes and Queries*, April 1887, pt. 7, pp. 133-138.
- 3 ——— (T. C. D.).—A Ramble on a Yorkshire Moor. [Millstone Grit, Coal-Measures, etc.]. *Nat. World*, July, pp. 119-122.
- 4 ——— Formation of a Yorkshire Boulder Committee. *Naturalist*, Jan., pp. 17-18; *Nat. World*, Feb., pp. 31-32; *Naturalist*, July, p. 224.
- 5 ——— English Lake Dwellings. *The Westminster Review* pp. 337-347. [See also 'The Lake Dwelling at Ulrome in Holderness.' *The Hull and East Riding Portfolio*, vol. 1, No. 3, June, pp. 92-94].
- 6 ——— Palæontology. Goniatites [Halifax Coal Measures]. *Wesley Nat.*, vol. 1, pp. 90-91.
- 7 ADAMSON, S. A.—On the Discovery of a Stone Implement in Alluvial Gravels at Barnsley. *Proc. Yorks. Geol. Soc.*, vol. ix., pt. 2, pp. 281, 282.
- 8 ——— Exposure of a Fault at Apperley. *Naturalist*, Jan., p. 18.
- 9 ——— Discovery of a Fossil Tree at Ilkley. *Ibid.*, p. 71.
- 10 ——— Amongst the Yorkshire Oolites. [North Grimston]. *Ibid.*, pp. 177-180; *Fourth Rep. Malton Nat. Soc.*, 1886-87, pp. 14-18.
- 11 ——— Geology of the Skipton and Ilkley Railway. *Ibid.*, pp. 202-208; *Proc. Yorks. Geol. Soc.*, vol. ix., pt. 3, pp. 363-369.
- 12 ——— The Yorkshire Naturalists' Union at Saltburn. *Naturalist*, pp. 221-224; at Gormire Lake and Thirkleby Park, pp. 239-241; at Sedbergh, pp. 282-284.
- 13 ——— Reports of Field Excursions. Malton, S. CHADWICK and M. B. SLATER, pp. 127-130. (See also *Fourth Rep.*

- Malton Nat. Soc.*, 1886-87, pp. 14-16). Skipton and Ilkley Railway, C. BROWNRIDGE, pp. 130-137. Kettle-ness and Staithes, E. M. COLE, pp. 137-140. Leyburn, W. HORNE, pp. 140-143. Thirkleby and Gormire, pp. 144-146. Sedbergh, pp. 146-148. Ingleton, C. D. HARD-CASTLE, pp. 148-151. Hatfield Chase, pp. 151-153. *Trans. Leeds Geol. Assoc.*, pt. 3, 1886-7.
- 14 ADAMSON, S. A.—Notes on the Discovery of a Large Fossil Tree in the Lower Coal Measures at Clayton, near Bradford. *Rep. Brit. Assoc.* for 1886, pp. 628-629.
- 15 ——— The Yorkshire Boulder Committee's Schedule. *Naturalist*, May, pp. 141-142.
- 16 ——— Geological Papers relating to the North of England, read at the Manchester Meeting of the British Association [report upon]. *Naturalist*, Oct., pp. 292-294.
- 17 ——— Recent Discoveries of Carboniferous Vegetation in Yorkshire. [Clayton, Ilkley, etc.]. 8vo. *Leeds*. Reprint with slight alterations from *Trans. Leeds Geol. Assoc.*, pt. 2, 1885-6, pp. 71-75.
- 18 BEDFORD, J. E.—Effects of Denudation. *Trans. Leeds Geol. Assoc.*, pt. 3, 1886-7, pp. 110-113.
- 19 BELL, J. L.—On the Manufacture of Salt near Middlesbrough. [Depth and thickness of Salt]. *Proc. Inst. Civ. Eng.*, xc., pp. 131-145, Discussion, pp. 146-158.
- 20 BEVAN, G. P.—Tourist's Guide to the East and North Ridings. Ed. 4. [See 1878].
- 21 BINNIE, A. R.—Report of the Waterworks Engineer to the Waterworks Committee on Underground Waters. 8vo. 6 pp.
- 22 BLAKE, J. F.—On a New Specimen of *Solaster murchisoni* from the Yorkshire Lias. *Geol. Mag.*, dec. iii., vol. iv., pp. 529-531.
- 23 BONNEY, T. G.—Presidential Address to Section C. at the Birmingham Meeting of the British Association. [The Application of microscopic analysis to discovering the physical geography of bygone ages]. *Rep. Brit. Assoc.* for 1886, pp. 601-621.
- 24 BRADY, G. S. [See T. R. Jones].
- 25 BRANSHAW, THOS.—Illustrated Programme of Excursions [of Bradford Historical and Antiquarian Society] to-

- Giggleswick and Settle, Saturday, Sept. 3rd. [Geological notes]. Pp. 20. 8vo.
- 26 BROWNRIDGE, C.—On the occurrence of Quartzite and other Boulders in the Lower Coal-Measures at Wortley, near Leeds. *Trans. Leeds Geol. Assoc.*, pt. 3, 1886-7, pp. 113-115. *Sci. Goss.*, June 1887, p. 140; *Proc. Yorks. Geol. Soc.*, vol. ix., pt. 3, pp. 405-407.
- 27 — [See S. A. Adamson].
- 28 BUCKMAN, S. S.—A Monograph of the Inferior Oolite Ammonites of the British Islands. Pt. 1, Introduction, pp. 1-24, plates i.-vi.; *Monog. Pal. Soc.*, vol. xl., for the year 1886.
- 29 CASH, W.—Palæontology [Fossils from the Halifax Hard Coal]. *Wesley Nat.*, vol. i., April 1887, pp. 58-60, 116-117.
- 30 CHADWICK, S.—Geology. [Report on investigations of the Society during 1886]. *Fourth Rep. Malton Nat. Sci.*, pp. 24, 25.
- 31 CLAGUE, D.—Hints for Holidays [Scarborough District]. *Trans. Liverp. Geol. Assoc.*, vol. 7, 1886-7, pp. 63-4.
- 32 — [See S. A. Adamson].
- 33 COLE, E. M.—On the frequent occurrence of Whinstone Erratics at Flamborough. *Naturalist*, pp. 289, 290.
- 34 — [See S. A. Adamson].
- 35 CROSSKEY, H. W.—Fourteenth Report . . . Erratic Blocks . . . [Settle, p. 223, Shiffnal and Tong, p. 224]. *Rep. Brit. Assoc.*, for 1886, pp. 223-226.
- 36 D——, T. C.—[See Anon].
- 37 DAUBRÉE, A.—Les Eaux Souterraines a l'époque actuelle, leur régime, leur température, leur composition au point de vue du rôle qui leur revient dans l'économie de l'écorce terrestre. [Yorkshire, pp. 214-216]. 8vo. *Paris*.
- 38 DAVIS, J. W.—On some remains of Fossil Trees in the Lower Coal-Measures at Clayton, near Halifax. *Proc. Yorks. Geol. Soc.*, vol. ix., pt. 2, pp. 253-256.
- 39 — On the Exploration of the Raygill Fissure in Lothersdale. *Ibid.*, pp. 280, 281; *Rep. Brit. Assoc.* for 1886, pp. 469, 470.
- 40 — On the Relative Age of the Remains of Man in Yorkshire. *Proc. Yorks. Geol. Soc.*, vol. ix., pt. 2, pp. 201-214.

- 41 DONALD, MISS J.—Notes upon some Carboniferous Species of Murchisonia in our Public Museums. [Yorkshire species]. *Quart. Journ. Geol. Soc.*, vol. xliii., pp. 617-631.
- 42 EMBLETON, D.—A Catalogue of the Place-names in Teesdale [many refer to physical features]. *Nat. Hist. Trans. Northumb., Durham, and Newcastle*. Vol. ix., pt. 1, pp. i.-xviii. and 1-223.
- 43 EMBLETON, T. W.—Notes on Ancient Coal Mining. *Proc. Yorks. Geol. Soc.*, vol. ix., pt. 2, pp. 257-265.
- 44 ETHERIDGE, R.—[See T. R. Jones].
- 45 FLIGHT, W.—A Chapter in the History of Meteorites. [Description of one that fell at Middlesbrough, March 14th, 1881]. Pp. xii.+221. 8vo. *London*.
- 46 GARDENER, J. S.—Second Report . . . on the Fossil Plants of the Tertiary and Secondary Beds of the United Kingdom. [Williamsonia, etc.]. Pp. 242, 243. *Rep. Brit. Assoc.*, for 1886, pp. 241-250.
- 47 GASCOYNE, R.—On the Eastern Extension of the Leeds and Nottingham Coalfield. [Boring at Drax, p. 257]. *Trans. Midl. Inst. Eng.*, vol. x., pp. 250-277.
- 48 GOMME, GEORGE LAWRENCE [edited by].—The Gentleman's Magazine Library. Romano-British Remains. Pt. ii., pp. xii.+632; Yorkshire (including references to the Devil's Arrows at Boroughbridge, etc.), on pp. 358-384.
- 49 GOODCHILD, J. G.—Ice Work in Edenside and some of the adjoining parts of North Western England. *Trans. Cumberland and Westmorland Assoc.*, No. 12 (1866-7), pp. 111-167.
- 50 GREEN, A. H., and A. STRAHAN.—The Geology of the Carboniferous Limestone, Yoredale Rocks, and Millstone Grit of North Derbyshire. [Borders of Yorkshire]. Explanation of parts of Sheets 88 S.E., 81 N.E., 81 S.E., 72 N.E., 82 N.W., 82 S.W., and 71 N.W. *Memoirs of the Geological Survey*. Ed. 2. Pp. xv.+212. 8vo. *London*. Ed. 1. [See 1869].
- 51 GRESLEY, W. S.—Re 'Explosive Slickensides.' [Leicestershire and Yorkshire]. *Geol. Mag.*, dec. iii., vol. iv., pp. 522, 523.

- 52 **HARDCASTLE, C. D.**—[See S. A. Adamson].
- 53 **HEMINGWAY, W.**—Notes on the Mineralogy of Barnsley. *Quart. Trans. Barnsley Nat. Soc.*, vol. v., pp. 3-7, 171.
- 54 **HIDDEN, W. E.**—On the Mazapil Meteoric-Iron [compared with the Meteorite which fell at Wold Cottage, near Scarborough, in 1795]. *Amer. Journ. Sci.*, ser. 3, vol. xxxiii., pp. 221-226 [224].
- 55 **HINDE, G. J.**—On the Character of the Beds of Chert in the Carboniferous Limestone of Yorkshire [which occur at Harrogate]. *Nature*, April 21st, vol. xxxv., p. 582.
- 56 — On the Organic Origin of the Chert in the Carboniferous Limestone Series of Ireland, and its similarity to that in the corresponding strata in North Wales and Yorkshire. *Geol. Mag.*, dec. iii., vol. iv., pp. 435-446; *Rep. Brit. Assoc.*, for 1887, pp. 688-692.
- 57 — A Monograph of the British Fossil Sponges. Pt. 1 (Bibliography and Introduction). [*Hyalostelia smithii*, from Richmond, plate vi.]. Pp. 1-92; plates i.-viii. *Monogr. Pal. Soc.*, vol. xl., for the year 1886.
- 58 **HOLMES, J.**—A sketch of the Pre-historic Remains on Rombald's Moor. *Proc. Yorks. Geol. Soc.*, vol. ix., pt. 2 pp. 283-315.
- 59 **HORNE, W.**—On Pre-historic Remains recently discovered in Wensleydale. *Ibid.*, pp. 175-179.
- 60 — [See S. A. Adamson].
- 61 **HOWORTH, HENRY H.**—The Mammoth and the Flood: An attempt to confront the theory of Uniformity with the facts of recent geology. Pp. xxxii.+464.
- 62 **HUDLESTON, W. H.**—A Monograph of the British Jurassic Gasteropoda. General Introduction. Pp. 1-15, and pt. 1, No. 1. Gasteropoda of the Inferior Oolite. Pp. 17-56. *Monogr. Pal. Soc.*, vol. xl., for the year 1886.
- 63 **HUGHES, T. MCK.**—On the Drifts of the Vale of Clwyd and their Relation to the Caves and Cave-Deposits. Yorkshire, pp. 90-97]. *Quart. Journ. Geol. Soc.*, vol. xliii., pp. 73-120.
- 64 — Bursting Rock Surfaces. [Dent Head quarries and Ribbles Head tunnel]. *Geol. Mag.*, dec. iii., vol. iv., pp. 511, 512.

- 65 HULL, E.—Dr. Hinde on the origin of Carboniferous Chert.  
*Geol. Mag.*, dec. iii., vol. iv., pp. 524-526.
- 66 JACKSON, E.—Recent Discoveries of Fossil Trees. [Clayton, near Bradford]. *Wesley Nat.*, vol. i., pp. 40-41.
- 67 JONES, T. R., R. ETHERIDGE, and H. WOODWARD.—Fourth Report . . . on Fossil Phyllopoda . . . [*Ceratiocaris leptodactylus* from Helm Knot, Dent, Yorkshire, p. 229]. *Rep. Brit. Assoc.* for 1886, pp. 229-234.
- 68 ——— J. W. KIRKBY, and G. S. BRADY.—See 1874].
- 69 KINAHAN, G. H.—Chert in Irish Carboniferous Rocks [refers to Dr. Hinde's paper]. *Geol. Mag.*, Nov., pp. 521-522.
- 70 KIRKBY, J. W.—[See T. R. Jones].
- 71 KNOWLTON, F. H.—[See W. C. Williamson].
- 72 KONINCK, L. G. DE, and M. LOHEST.—Notice sur le parallelisme entre le calcaire carbonifère du nord-ouest de l'Angleterre et celui de la Belgique [abstract]. *Neu. Jahrb. f. Min. Geol. u. Palaeont.*, Bd. ii., Rep., p. 279. [See also under 1886].
- 73 KROPP, LEWIS L.—The Early History of Spurn Head. *The Hull and East Riding Portfolio*, vol. i., No. 2, April, pp. 45-53, and vol. i., No. 3, June, pp. 70-76; vol. i., No. 4, August, pp. 105-112. [See also 'A Chart of the Humber in 1725,' by L. L. K[ROPP], *loc. cit.*, vol. i., No. 6, pp. 9-89].
- 74 LAMPLUGH, G. W.—Mammaliferous Gravels at Elloughton, in the Humber Valley. *Nature*, vol. xxxvi., p. 153; *Proc. Yorks. Geol. Soc.*, vol. ix., pt. 3, pp. 407-411, 1888.
- 75 LEBOUR, G. A.—On the Stratigraphical Position of the Salt-Measures of South Durham [and Cleveland]. *Geol. Mag.*, dec. iii., vol. iv., p. 39; *Rep. Brit. Assoc.* for 1886, p. 673.
- 76 LEWIS, H. CARVILL.—Comparative Studies upon the Glaciation of North America, Great Britain and Ireland. [Vale of York]. *Geol. Mag.*, dec. iii., vol. iv., pp. 28-32. *Rep. Brit. Assoc.* for 1886, pp. 632-635.
- 77 ——— On some important Extra-Morainic Lakes in Central England, North America, and elsewhere, during the Period of Maximum Glaciation, and on the Origin of Extra-Morainic Boulder-clay. [Lake Humber in the



- Vale of York]. *Geol. Mag.*, dec. iii., vol. iv., pp. 515-517; *Nature*, vol. xxxvi., p. 573; *Science Gossip*, vol. xxiii., No. 275, Nov., p. 262; *Rep. Brit. Assoc.* for 1886, pp. 692, 693.
- 78 LEWIS, H. CARVILL.—The Terminal Moraines of the Great Glaciers of England. *Nature*, vol. xxxvi., p. 573; *Rep. Brit. Assoc.*, for 1887, pp. 691, 692.
- 79 — [See 1886].
- 80 LOFTHOUSE, R.—The River Tees: its Marshes and their Fauna. [Geological notes]. *Naturalist*, Jan., pp. 1-16.
- 81 LOHEST, M.—[See L. G. de Koninck].
- 82 LYDEKKER, R.—[See 1885].
- 83 MARR, J. E.—The Work of the Ice-sheets. [Pennine Chain]. *Geol. Mag.*, dec. iii., vol. iv., pp. 151-155.
- 84 — The Lower Palæozoic Rocks near Settle. *Ibid.*, pp. 35-38. *Rep. Brit. Assoc.* for 1886, pp. 663-664.
- 85 MORTIMER, J. R.—On the Habitation Terraces of the East Riding. *Proc. Yorks. Geol. Soc.*, vol. ix., pt. 2, pp. 221-224.
- 86 MORTON, G. H.—Early Life on Earth. *Proc. Liverpool Geol. Soc.*, vol. 5, pt. 3, pp. 209-241.
- 87 PATTISON, S. R.—The Coal Reefs of England. [Mountain Limestone and Corallian rocks of Yorkshire]. *Leisure Hour*, June and July, pp. 420-423, 493-496.
- 88 PHILLIPS, J. A.—Elements of Metallurgy. Ed. 2. [See 1874].
- 89 PLATNAUER, H. M.—On the Occurrence of *Strophodus rigauxi* Sauv., in the Yorkshire Cornbrash. *Rep. York Phil. Soc.* for 1886, pp. 36-40.
- 90 RICKETTS, C.—The Base of the Carboniferous Limestone. [Ingleborough]. *Proc. Liverpool Geol. Soc.*, vol. v., pt. 3, pp. 262-271.
- 91 ROBERTS, T.—On the Correlation of the Upper Jurassic Rocks of the Swiss Jura with those of England. [Comparison with Yorkshire]. *Quart. Journ. Geol. Soc.*, vol. xliii., pp. 229-269.
- 92 ROSENBUSCH, H.—Mikroskopische Physiographie der Massigen Gesteine. [Sedbergh, Cleveland, etc.]. Ed. 2. Pp. 877. 8vo. *Stuttgart*.

- 93 SEELEY, H. G.—On the Mode of Development of the Young in Plesiosaurus. [Specimen from the Lias of Whitby]. *Geol. Mag.*, dec. iii., vol. iv., pp. 562, 563. ; *Rep. Brit. Assoc.* for 1887, pp. 267-268.
- 94 SLATER, M. B.—[See S. A. Adamson].
- 95 SPENCER, J.—On Boulders found in Seams of Coal. [Lancashire, but refers to Leeds]. *Quart. Journ. Geol. Soc.*, vol. xliii., pp. 734, 735 ; *Geol. Mag.*, dec. iii., vol. iv., pp. 377, 378 ; *Sci. Goss*, Aug., p. 189
- 96 STEVENSON, A. S.—Presidential Address [reviews various excursions to Yorkshire]. *Nat. Hist. Trans. Northumb., and Durham*. Vol. viii., pt. 2, pp. 225-239.
- 97 STOCKS, H. B.—On a Concretion called Acrespire. [Analyses of concretions from Halifax] *Proc. Yorks. Geol. Soc.*, vol. ix., pt. 2, pp. 149, 150.
- 98 STRAHAN, A.—[See A. H. Green].
- 99 TEALL, J. J. H.—Note on Cleveland Iron Ore. *Mineralog. Mag.*, vol. vii., p. 236.
- 100 TOMLINSON, JOHN.—Doncaster from the Roman Occupation to the present time [details of boring to depth of over 200 yards (pp. 306-7), etc.]. *Doncaster*, pp. viii. + 363.
- 101 TUTE, J. S.—The Cayton Gill Beds. *Proc. Yorks. Geol. Soc.*, vol. ix., pt. 2, pp. 265-267.
- 102 WALTON, F. F.—[See 1886].
- 103 WILLIAMSON, W. C.—On the Organization of the Fossil Plants of the Coal-Measures. [Specimen from Halifax]. *Proc. Roy. Soc.*, vol. xlii., pp. 8-10.
- 104—— On recent Researches among the Carboniferous Plants of Halifax. *Rep. Brit. Assoc.* for 1886, pp. 654, 655.
- 105—— A Monograph on the Morphology and Histology of *Stigmaria ficoides*. [Section of strata at Halifax, p. iv.]. Pp. i.-iv., 1-62 ; plates i.-xv. *Monogr. Pal. Soc.*, vol. xl., for the year 1886 ; Reviewed by F. H. KNOWLTON, *Bot. Gazette*, vol. xiii., p. 43, 1888.
- 106 WOODWARD, H.—On Some Spined Myriapods from the Carboniferous Series of England. [From the Carboniferous Limestone of Grassington, p. 9]. *Geol. Mag.*, dec. iii., vol. iv., pp. 1-10.
- 107—— [See T. R. Jones].

- 108 WOODWARD, H. B.—The Geology of England and Wales, with Notes on the Physical Features of the Country. Ed. 2. Pp. xv. + 670. 8vo. *London*. Ed. 1. 1876. [See *Naturalist*, Oct., pp. 300-302].

1888.

- 1 ANON.—Dove Cote Gill ; or, Dowker Gill Cavern. *Kendal Mercury and Times*, April 27th ; *Westmorland Note-Book*, vol. i., pt. 4, Dec., pp. 184-187.
- 2 — The Yorkshire Naturalists' Union [at Saddleworth]. *Research*, July, p. 14.
- 3 — The Yorkshire Boulder Committee and its Work. *Ibid.*, pp. 89, 90.
- 4 — (L. F. V. H.).—Water Supply. *Ency. Brit.*, ed. 9, vol. xxiv., pp. 402-410.
- 5 — Down Goyden Pot [the natural tunnel in which the Nidd flows]. *Chambers' Journ.*, May 5th, No. 227, ser. 5, vol. v., pp. 273-276.
- 6 — An Ancient British Industry (Whitby Jet). *Echo*, Sept. 8th.
- 7 — Report of the Inspectors of Mines. *Parliamentary Report*. Fol. *London*.
- 8 — List of Exchanges and Donations to the Museum and Library of the Natural History Society. [Yorkshire fossils, pp. 289-294]. *Trans. Northumberland Durham Nat. Hist. Soc.*, vol. ix., pt. 2, pp. 262-298.
- 9 — Fossils [from Snydale Colliery]. *Nat. Hist. Journ.*, vol. 12, Oct., p. 158.
- 10 — (H. A. A., of Hull).—Harrogate and Dinsdale-on-Tees. [Comparison of the two places. Analyses of Dinsdale Spring]. *Research*, Sept., vol. i., p. 46.
- 11 — (T. F. H[ENDERSON]).—York. [General account of the geology, physical features, minerals, etc., of the county]. *Ency. Brit.*, ed. 9, vol. xxiv., p. 746.
- 12 A—, H. A.—[See Anon].
- 13 ADAMSON, S. A.—Notes on a Recent Discovery of *Stigmaria ficoides* at Clayton, Yorkshire. *Quart. Journ. Geol. Soc.*, vol. xlv., pp. 375-377 ; *Geol. Mag.*, dec. iii., vol. v., p. 285.

- 14 ADAMSON, S. A.—The Yorkshire Boulder Committee and its First Year's Work. Leeds, C. D. HARDCASTLE, pp. 18, 19 ; Flamborough Head, E. M. COLE, p. 19 ; North Riding, W. GREGSON, pp. 19, 20 ; Piercebridge, Barnard Castle, R. T. MANSON, pp. 20, 21 ; Scarborough, J. H. PHILLIPS, p. 23. *Naturalist*, pp. 17-24.
- 15 ——— The Yorkshire Boulder Committee and its Second Year's Work. North and East Ridings, E. M. COLE and S. CHADWICK, pp. 333-343 ; York, H. M. PLATNAUER, pp. 343, 344 ; Northallerton, T. PARKINSON, pp. 344, 345 ; Ripon, R. A. SUMMERFIELD, p. 345 ; Norber, J. W. DAVIS, pp. 345, 346 ; Saltburn, W. Y. VEITCH, p. 346 ; Filey and Hunmanby, W. H. GILL, pp. 346, 347 ; Lindholme, C. BROWNRIDGE, p. 347 ; Guisborough, W. GREGSON, p. 347 ; Cundall, T. C. MITCHELL, p. 348 ; Youlthorpe, R. MORTIMER, p. 348. *Naturalist*, pp. 332-348.
- 16 ——— Calverley Wood Quarries, Leeds. *Trans. Leeds Geol. Assoc.*, pt. 4, pp. 227, 228 ; *Naturalist*, p. 276.
- 17 ——— Glacier Work in Airedale. [Apperley Bridge]. *Trans. Leeds Geol. Assoc.*, pt. 4, pp. 230, 231 ; *Naturalist*, p. 297.
- 18 ——— J. E. Bedford, F.G.S. [Biographical notice]. *Trans. Leeds Geol. Soc.*, pt. iv., p. 232.
- 19 ——— The Yorkshire Naturalists' Union at Hatfield Chase. *Naturalist*, pp. 87, 88 ; in Lower Wensleydale, pp. 173-177 ; at Saddleworth, pp. 214-216 ; at Robin Hood's Bay, pp. 240-242 ; at Market Weighton, pp. 260-282 ; also *Trans. Leeds Geol. Assoc.*, pt. 4, pp. 211, 212, 215-219, 224-226, 227-230, and *Research*, vol. i., p. 14.
- 20 ——— Reports of Excursions. Hull and Barnsley Railway, South Cave and District. *Trans. Leeds Geol. Assoc.*, pt. 4, pp. 207-209 ; Knaresborough and Plompton, pp. 209-211 ; Meanwood Valley, pp. 213-215 ; Knaresborough and Nidd Bridge, pp. 219-221 ; Beeston and Batley Railway, pp. 221-224.
- 21 ——— and HARKER, ALFRED.—Bibliography . . . North of England. Geology and Palæontology. 1886. *Naturalist*, June, pp. 178-188.

- 22 AVELINE, W. T., ETC.—Geology of Kendal. Ed. 2. [See 1872].
- 23 BAILEY, H.—[See H. W. Burrows].
- 24 BAKER, J. G.—North Yorkshire: Studies of its Botany, Geology, Climate, and Physical Geography. [Geology corrected and revised by J. E. CLARK, assisted by H. M. PLATNAUER, pp. 5-45]. *Trans. Yorks. Nat. Union*, pt. 11, for 1885, pp. 1-45, published, March 1888; pt. 12, pp. 49-144, Jan. 1889; pt. 13, pp. 145-272, Sept. 1889; pt. 15, pp. 273-336, Nov. 1890; pt. 17, pp. 337-400, Oct. 1892. Ed. 1, 1863.
- 25 BALDERSON, M.—[See R. R. Balderson].
- 26 BALDERSTON, R. R.—Evidences of Glacial Action near Ingleton. *Naturalist*, pp. 189-193, 234.
- 27 ——— and M. BALDERSTON.—Ingleton: Bygone and Present. [Geology, pp. 204-227, 312-358]. Pp. 368. 8vo. *London and Ingleton*.
- 28 BARROIS, C.—[See E. Westlake].
- 29 BARROW, G.—The Geology of North Cleveland. Explanation of Quarter Sheets 104 S.W. and S.E. *Memoirs of the Geological Survey*, Pp. 101. 8vo. *London*.
- 30 BLAKE, J. F.—On a Starfish from the Yorkshire Lias. [*Solaster* from Huntcliff]. *Rep. Brit. Assoc. for 1887*, p. 716; *Nature*, vol. xxxvi., p. 591.
- 31 ——— Report of Sub-Committee on Permian, Triassic, and Jurassic (Lias and Rhætic). *Congrès Geol. Internat.*, 3me Session, 1885, pp. 486-494. 8vo. *Berlin*.
- 32 BOYNTON, T.—On the Bronze Implements found in the East Riding of Yorkshire. *Proc. Yorks. Geol. Soc.*, vol. ix., pt. 3, pp. 426-427.
- 33 BRADSHAW, B.—Dictionary of Mineral Waters. Ed. 4, pp. lxxxiii., 408. [See 1882].
- 34 BRITTON, T.—Harrogate as a Winter Health Resort: being the Presidential Address to the Yorkshire Association of Officers of Health, March 13th, 1888. [Section showing geological structure]. Pp. 8. 8vo. *Harrogate*. Reprinted from the *Harrogate Advertiser*, March 17th.
- 35 BROWN, H. T.—A Chapter in the Physical Geography of the Past. Presidential Address to the Burton Nat. Hist. Soc. [Leics., Derbys., Yorks.]. *Midl. Nat.*, vol. xi., pp. 198-203, 224-228, 246-251, 281-287, 308-312.

- 36 BROWNRIDGE, C.—On the Occurrence of Quartzite and other Boulders in the Lower Coal Measures at Wortley, near Leeds. *Proc. Yorks. Geol. Soc.*, vol. ix., pt. 3, pp. 405-407; *Naturalist*, pp. 49-51.
- 37 BROWNRIDGE, C.—The Lindholme Boulders. [Near Halifax]. *Naturalist*, p. 347.
- 38 BUCKMAN, S. S.—[See S. A. Adamson].
- 39 ——— [See J. F. Walker].
- 40 BULMAN, G. W.—The Influence of Geology on Population. *Sci. Goss.*, pp. 177-179.
- 41 BURROWS, H. W., C. D. SHERBURN, and H. BAILEY. The Foraminifera of the Red Chalk. [Speeton]. *Journ. Roy. Mic. Soc.*, pt. 1, pp. 383-385.
- 42 CASH, W.—On the Fossil Fructifications of the Yorkshire Coal-Measures. *Proc. Yorks. Geol. Soc.*, vol. ix., pt. 3, pp. 435-439.
- 43 CHADWICK, S.—Ancient and Modern; or, Scenes in the History of a Glacial Pebble. [British stone hammer made out of Whinstone]. *Naturalist*, p. 51.
- 44 ——— [See S. A. Adamson].
- 45 CHEETHAM, W.—From the Millstone Grits to the Silurians. [Tour from Horsforth into Ribblesdale and Wharfedale]. *Trans. Leeds Geol. Assoc.*, pt. 4, pp. 194-204.
- 46 CLARK, J. E.—[See J. G. Baker].
- 47 COLE, E. M.—Note on Dry Valleys in the Chalk. *Proc. Yorks. Geol. Soc.*, vol. ix., pt. 3, pp. 343-346.
- 48 ——— The Rudstone. *Naturalist*, pp. 81, 82.
- 49 ——— [See S. A. Adamson].
- 50 CREWDSON, G.—Cambrian and Silurian Fossils from Westmorland, Cumberland, and North Lancashire, in the Kendal Museum. *Westmorland Note-Book*, vol. i., pt. 2, pp. 34-44.
- 51 CROSSKEY, H. W.—Fifteenth Report . . . Erratic Blocks . . . [Yorkshire, pp. 238-244]. *Rep. Brit. Assoc. for 1887*, pp. 236-244.
- 52 ——— Note upon the 'Hitchingstone,' Keighley Moor. *Naturalist*, Jan., pp. 23-24.
- 53 DAKYNS, J. R.—[See A. Strachan].
- 54 DAVIS, J. W.—On the Ancient Flint-users of Yorkshire. *Proc. Yorks. Geol. Soc.*, vol. ix., pt. 3, pp. 411-425.

- 55 DAVIS, J. W.—On the Discovery and Excavation of an Ancient Sea-beach, near Bridlington Quay, containing Mammalian Remains. *Rep. Brit. Assoc. for 1887*, pp. 694-696.
- 56 ——— Report on the localities . . . in which evidences of the existence of Pre-historic Inhabitants of the country are found. *Ibid.*, pp. 168-172.
- 57 ——— The Norber Group of Boulders. *Naturalist*, pp. 346-7.
- 58 ——— [See S. A. Adamson].
- 59 DAWKINS, W. B.—On the Geography of the British Isles in the Carboniferous Period. [Ingleborough]. *Trans. Manchester Geol. Soc.*, vol. xix., pt. 1, pp. 37-47; *Rep. Brit. Assoc. for 1877*, pp. 684-686.
- 60 ——— On the Structure of the Millstone Grit of the Pennine Chain. *Ibid.*, p. 686.
- 61 DAWSON, J. W.—The Geological History of Plants. Pp. x. × 290. 8vo. *London*.
- 62 DEELEY, R. M.—Correlation of the Lincolnshire Pleistocene Deposits with those of the Midland Counties. [Humber valley]. *Geol. Mag.*, dec. iii., vol. v., pp. 153-155.
- 63 DE RANCE, C. E.—Notes on the Vale of Clwyd Caves [section of Victoria Cave]. *Proc. Yorks. Geol. and Polyt. Soc.*, vol. xi., pt. 1, pp. 1-20.
- 64 EMBLETON, D.—A Catalogue of the Place-Names in Teesdale [refers to physical features]. *Nat. Hist. Trans., Northumb., Durham and Newcastle-on-Tyne*, vol. ix., pp. 1-223.
- 65 ETHERIDGE, R.—Fossils of the British Islands stratigraphically and zoologically arranged. Pp. viii.+468. 4to. *Oxford*.
- 66 FLETCHER, L.—An Introduction to the Study of Meteorites. [Yorkshire specimens]. Pp. 92. 8vo. *London*.
- 67 FOORD, A. H.—Catalogue of the Fossil Cephalopoda in the British Museum. [Many Yorkshire species]. 3 parts. 8vo. *London*, 1888-97.
- 68 FOX-STRANGWAYS, C., and G. W. LAMPLUGH.—La Géologie du l'est du Yorkshire *Congrès Geol. Internat.*, 4me Session; Explications des Excursions, pp. 131-175; Republished 1891, pp. 371-415. 8vo. *London*.

- 69 GASCOYNE, R.—The Easterly Extension of the Leeds and Nottingham Coalfields. *Trans. Midl. Inst. Eng.*, vol. x., pp. 250-260.
- 70 GEIKIE, A.—The History of Volcanic Action during the Tertiary Period in the British Isles. [Cleveland Dyke]. *Trans. Roy. Soc., Edinburgh*, vol. xxxv., pp. 21-184.
- 71 GILL, W. H.—[See S. A. Adamson].
- 72 GRANTHAM, R. F.—Notes on Water Supply, with special reference to Villages, and Country Mansions. [Yorkshire, pp. 197-198]. *Trans. Inst. Surveyors*, vol. xx., pp. 129-150, Discussion, pp. 151-162, 193-218.
- 73 GREGSON, W.—[See S. A. Adamson].
- 74 ——— [Boulders at Guisborough]. *Naturalist*, pp. 347-8.
- 75 GRESLEY, W. S.—[Letter on Correlation of Coal-Seams in the North of England]. *Trans. N. Eng. Inst. Mining and Mech. Engineers*, vol. xxxvii., pp. 123-125.
- 76 ——— On the Occurrence of Boulders and Pebbles in the Coal-Measures. *Trans. Manch. Geol. Soc.*, vol. xix., pt. 18, pp. 488-504.
- 77 H——, L. F. V.—[See Anon].
- 78 HARDCASTLE, C. D.—[See S. A. Adamson].
- 79 HARKER, A.—The Igneous Dykes of the North of England. *Naturalist*, pp. 349-353.
- 80 ——— [See S. A. Adamson].
- 81 H[ENDERSON], T. F.—[See Anon.].
- 82 HILL, W.—On the Lower Beds of the Upper Cretaceous Series in Lincolnshire and Yorkshire. With the description of a New Species of *Holaster*, by A. J. JUKES-BROWNE. *Quart. Journ. Geol. Soc.*, vol. xlv., pp. 320-367.
- 83 HINDE, G. J.—A Monograph of British Fossil Sponges. Pt. 2. [Yorkshire, pp. 99, 116, 143, 144, 145, 150, 152, 160]. Pp. 93-188; plate ix. *Monogr. Pal. Soc.*, vol. xli., for the year 1887.
- 84 HOLGATE, B.—The Magnesian Limestones of Yorkshire, *Trans. Leeds. Geol. Assoc.*, pt. 4, pp. 182-184.
- 85 HORSFALL, J.—[See R. Law].
- 86 HUDLESTON, W. H.—A Monograph of the British Jurassic Gasteropoda. Pt. 1, No. 2, Gasteropoda of the Inferior Oolite. [Yorkshire, pp. 74-77, 84, 85, 87, 110, 112, 113.



- 116, 118, 119, 125, 130]. Pp. 57-136; plates i.-vi.  
*Monogr. Pal. Soc.*, vol. xli., for the year 1887.
- 87 HUDLESTON, W. H.—Excursion to Scarborough. *Research*, vol. i., pp. 29, 30.
- 88—— Report of Sub-Committee on Permian, Triassic, and Jurassic [Classification of the Oolites]. *Congrès Geol. Internat.*, 3me Session, pp. 457-483. 8vo. Berlin.
- 89 HUGHES, T. McK.—On Caves. [Ingleborough]. *Journ. Trans. Vict. Inst.*, vol. xxi., pp. 77-97, Discussion, pp. 97-106.
- 90 IRVING, A.—Report of Sub-Committee on Permian, Triassic, and Jurassic (Permian and Trias). *Congrès Geol. Internat.*, pp. 496-506.
- 91 ISMAY, J.—Some Account of the Parish of Mirfield. [Soils, building-stones, coal, springs, etc.]. *Yorks. Notes and Queries*, pts. 10, 11, Jan. and April, pp. 206-211.
- 92 JONES, J. R.—Fifth Report . . . on Fossil Phyllopoda . . . [*Dithyrocaris tenuistriata*, Settle]. *Rep. Brit. Assoc.*, for 1887, pp. 64, 65.
- 93 JUDD, J. W.—The Relation between the Central Scientific Societies and the Local ones. [History of Yorkshire Geology]. *Proc. Yorks. Geol. Soc.*, vol. ix., pt. 3, pp. 474-479.
- 94 JUKES-BROWNE, A. J.—Description of a new Species of *Holaster*. [From Speeton and Ganton]. *Quart. Journ. Geol. Soc.*, vol. xlv., pp. 364-366.
- 95—— [See W. Topley].
- 96—— [See C. Fox-Strangways].
- 97 KIDSTON, R.—On the Fructification of two Coal-Measure Ferns. [*Crossothea fimbriata*, from Barnsley]. *Ann. Mag. Nat. Hist.*, ser. 6, vol. ii., pp. 22-27.
- 98—— Additional Notes on some British Carboniferous Lycopods. [*Bothrodendron minutifolium*, from Barnsley]. *Proc. Roy. Phys. Soc., Edinburgh*, cxviii., vol. x., pp. 88-97.
- 99 KING, F. D.—[See M. Tait].
- 100 KING, S.—List of Coralline Oolite Fossils, etc., Ancient British and Roman Remains. Presented to the Malton Museum by S. King, Esq., Malton [with particulars of the various pits, etc.]. Pp. 10.

- 101 KNOWLTON, F. H.—[See W. C. Williamson, 1887].
- 102 LAMPLUGH, G. W.—On the larger Boulders of Flambro' Head. *Proc. Yorks. Geol. Soc.*, vol. ix., pt. 3, pp. 339-343; vol. xi., pt. 2, pp. 231-239; vol. xi., pt. 3, pp. 397-408.
- 103 — Report on the Buried Cliff at Sewerby, near Bridlington. *Proc. Yorks. Geol. Soc.*, vol. ix., pp. 381-392.
- 104 — On a Mammaliferous Gravel at Elloughton in the Humber Valley. *Ibid.*, pp. 407-411.
- 105 — On photograph of Cliff-section at Hilderthorpe. *Ibid.*, pp. 433, 434.
- 106 — [See C. Fox-Strangways].
- 107 LAW, R., and J. HORSEFALL.—An account of Small Flint Implements found beneath Peat on several elevated points of the Pennine Chain, lying between Huddersfield and Oldham. *Trans. Manchester Geol. Soc.*, vol. xix., pt. 20, pp. 599-603.
- 108 — — On the Discovery of Carboniferous Fossils in a Conglomerate at Moughton Fell, near Settle, Yorkshire. *Geol. Mag.*, dec. iii., vol. v., p. 30; *Rep. Brit. Assoc.* for 1887, p. 690.
- 109 LEES, F. A.—The Flora of West Yorkshire, with a sketch of the Climatology and Lithology in connection therewith. [Lithology, pp. 65-84, and map]. Pp. 843. 8vo. *London*.
- 110 LEWIS, H. CARVILL.—The Terminal Moraines of the Great Glaciers of England. *Rep. Brit. Assoc.* for 1887, pp. 691-2.
- 111 LYDEKKER, R.—Note on the Classification of the Ichthyopterygia (with a Notice of Two New Species). [*I. zetlandicus*, from Whitby, p. 313]. *Geol. Mag.*, dec. iii., vol. v., pp. 309-314.
- 112 — Catalogue of the Fossil Reptilia and Amphibia in the British Museum (Natural History). Pts. 1-4. 8vo. *London*, 1888-90.
- 113 MANSON, R. T.—[See S. A. Adamson].
- 114 MARR, J. E., and H. A. NICHOLSON.—The Stockdale Shales. [Ribblesdale, Teesdale, etc.]. *Quart. Journ. Geol. Soc.*, vol. xlv., pp. 654-732.
- 115 — and R. H. TIDDEMAN.—La Géologie de l'ouest du

- Yorkshire. *Congrès Geol. Internat.*, 4me. Session ; Explications des Excursions, pp. 63-106 ; Republished 1891, pp. 303-346. 8vo. *London*.
- 116 MITCHELL, T. C.—[See S. A. Adamson].
- 117 MORTIMER, R.—[See S. A. Adamson].
- 118 MORTON, G. H., and A. STRAHAN.—Report of Sub-Committee on Carboniferous, Devonian, and Old-Red. *Congrès Geol. Internat.*, 3me Session, 1885, pp. 508-514. 8vo. *London*.
- 119 NEWTON, E. T.—On the Skull, Brain, and Auditory Organs of a new Species of Pterosaurian (*Scaphognathus purdoni*) from the Upper Lias, near Whitby, Yorkshire. *Proc. Roy. Soc.*, vol. xliii., pp. 436-440 ; *Trans. Roy. Soc.*, vol. clxxix. (1888), B. pp. 503-537 ; *Nature*, April 19. h, vol. xxxvii., p. 598.
- 120 NICHOLSON, H. A.—[See J. E. Marr].
- 121 PARKINSON, T.—[See S. A. Adamson].
- 122 PHILLIPS, J. H.—[See S. A. Adamson].
- 123 PLATNAUER, H. M.—Note on some Crystals of Celestine [from the bed of the Nidd, near Knaresborough]. *Ann. Rep. Yorks. Phil. Soc.* for 1887, p. 34.
- 124 ——— Note on *Hybodus obtusus* Ag. [From Corallian of Malton]. *Ann. Rep. Yorks. Phil. Soc.* for 1887, pp. 35, 36.
- 125 ——— [See S. A. Adamson].
- 126 ——— [See J. G. Baker].
- 127 PRESTWICH, J.—Geology—Chemical, Physical and Stratigraphical. Vol. ii. Stratigraphical and Physical. 8vo. *Oxford*. [Vol. i., 1886].
- 128 REID, C.—Note on the Geological History of the Recent Flora of Britain. [Bridlington, Hornsea, etc.]. *Ann. Bot.*, vol. ii., pp. 179-199.
- 129 SEELEY, H. G.—[See under 1887].
- 130 SEWARD, A. C.—Woodwardian Museum Notes. On a Specimen of *Cyclopteris* Brong. [Brierley Common, Barnsley]. *Geol. Mag.*, dec. iii., vol. v., pp. 344-347.
- 131 SHERBORN, C. D.—[See H. W. Burrows].
- 132 SQUIRE, W.—The Sulphur Springs of Great Britain and their Therapeutic Action. [The situation of Harrogate and Dinsdale geologically similar]. *Lancet*, Aug. 4th, vol. ii., pp. 201-203.

- 133 STRAHAN, A., J. R. DAKYNS, and R. H. TIDDEMAN.—  
Geology of the Country around Kendal, Sedbergh, Bowness and Tebay. Explanation of Quarter Sheet 98 N.E. (N.S. 39). *Memoirs of the Geological Survey*. 8vo. London.
- 134 STRAHAN, A.—[See G. H. Morton].
- 135 SUMMERFIELD, R. A.—[See S. A. Adamson].
- 136 TAIT, M.—Yorkshire : its Scenes, Lore and Legends, with Geological Map by F. D. KING. [Geology, pp. 2-7]. Pp. 100, 12mo. Leeds.
- 137 TATE, A. N.—Scientific Aspects of Health Resorts. No. 1. Harrogate. [Geological notes and illustrations]. *Research*, vol. i., pp. 5-7.
- 138 TATE, T.—Yorkshire Petrology. (Introduction and Part 1. The Lamprophyres). *Proc. Yorks. Geol. Soc.*, vol. ix., pt. 3, pp. 372-381.
- 139 TEALL, J. J. H.—British Petrology ; with special reference to the Igneous Rocks. [Cleveland Dyke, p. 200]. 4to. London. Commenced in 1886.
- 140 TIDDEMAN, R. H.—[See J. E. Marr].
- 141 ——— [See A. Strachan].
- 142 TOPLEY, W., and JUKES-BROWNE, A. J.—Report of Subcommittee, No. 2. Cretaceous [nomenclature of the beds]. *Congrès Geol. International*. 3rd Session, 1885. pp. 441-455. Berlin.
- 143 TORELL, O.—On the Extension of the Scandinavian Ice to Eastern England in the Glacial Period. *Rep. Brit. Assoc. for 1887*, pp. 723-734. *Nature*, vol. xxxvi., p. 573.
- 144 TRAQUAIR, R. H.—Notes on Carboniferous Selachii. [Refers to J. W. Davis's work]. *Geol. Mag.*, dec. iii., vol. v., pp. 81-86.
- 145 ——— Further Notes on Carboniferous Selachii. [Yorkshire Species]. *Proc. Roy. Phys. Soc. Edinburgh*, vol. ix., pt. 3, pp. 421-426.
- 146 TUTE, J. S.—Note on the occurrence of *Lingula* in the Millstone Grit Series, west of Ripon. *Proc. Yorks. Geol. Soc. for 1887*, vol. ix., pt. 3, p. 425.
- 147 VEITCH, W. Y.—[See S. A. Adamson].

- 148 WALKER, J. F.—On the occurrence of *Terebratula gesneri* in Yorkshire. *Ann. Rep. Yorks. Phil. Soc.* for 1887, pp. 33, 34.
- 149 ——— and S. S. BUCKMAN. [On the distribution of *Rhynchonella spinosa*]. Report of a communication to the Yorkshire Philosophical Society]. *Yorkshire Herald*, Dec. 5th.
- 150 WALTON, F. F.—[Geology of Welton Vale]. *Naturalist*, p. 47.
- 151 WATTS, W.—Distribution of Erratics and Boulder Clay on the lower portions of the Drainage Areas of the Oldham Corporation Waterworks. [West Yorkshire]. *Trans. Manchester Geol. Soc.*, vol. xix., pt. 20, pp. 584-598; *Naturalist*, 1889, pp. 305-307.
- 152 WESTLAKE, E.—Tabular Index to the Upper Cretaceous Fossils of England and Ireland, cited by Dr. Charles Barrois in his 'Description Géologique de la Craie de l'Île de Wight,' Paris, 1875, et 'Recherches sur le Terrain Crétacé Supérieur de l'Angleterre et de l'Irlande.' Pp. 24. 4to. *Fordingbridge*. [See Barrois, C., 1876].
- 153 WILLIAMSON, W. C.—The Fossil Trees of the Coal Measures. [Clayton Fossil Tree]. *Trans. Manchester Geol. Soc.*, vol. xix., pts. 14, 15, pp. 382-388.
- 154 ——— Report of the Committee . . . for the purpose of investigating the Carboniferous Flora of Halifax and its neighbourhood. *Rep. Brit. Assoc.* for 1887, pp. 235, 236.
- 155 ——— On Some Anomalous Cells developed within the interior of the Vascular and Cellular Tissues of the Fossil Plants of the Coal Measures [from the Halifax beds]. *Ann. Bot.* Feb., pp. 315-323.
- 156 WILSON, E.—On the Durham Salt-District. [Middlesborough]. *Quart. Journ. Geol. Soc.*, vol. xlv., pp. 761-782. *Research*, vol. i., pp. 92, 93, 108, 109.
- 157 WOODWARD, H. B.—Report of the Sub-Committee. Recent and Tertiary. [Deals with the nomenclature of the Pliocene, Pleistocene and Recent Beds] *Congrès Geol. Internat.*, 3rd Session, 1885, pp. 405-420. 8vo. *Berlin*.

1889.

- 1 ANON.—Photographs of Geological Scenery : work for the Field Clubs. [Curved strata near Draughton, by Dr. E. W. Reid]. *Leisure Hour*, pp. 643, 644.
- 2 ——— Hull Geologists at Acklam Brow. *Research*, July, p. 22. Yorkshire Naturalists' Union, Geological Section [at Leyburn, Saddleworth and Market Weighton]. *Research*, Jan., p. 117.
- 3 ——— Two Remarkable Pebbles [from Boulder Clay at Laister Dyke]. *Research*, vol. ii., p. 106.
- 4 ——— Local Museums.—V., Manchester. [Notes on the Clayton *Stigmaria*]. *Research*, vol. i., pp. 107, 108.
- 5 ——— Rivers of the East Coast of Britain. Descriptive, Historical and Pictorial. Large 4to.
- 6 ——— Reports of the Inspectors of Mines. *Parliamentary Report*. Fol. London.
- 7 ABBS, H. C.—Address to the Tyneside Naturalists' Field Club, May 1886. [Account of Field Meetings in Upper Wensleydale, p. 328, at Semmerwater, p. 335, Saltburn p. 340]. *Trans. Northumberland Durham Nat. Hist. Soc.*, vol. viii., pp. 326-345.
- 8 ADAMSON, S. A.—The Yorkshire Boulder Committee and its third year's work. North and East Riding. S. CHADWICK, pp. 294-303 ; Tanfield, R. A. SUMMERFIELD, p. 303 ; Manfield, W. F. K. STOCK, p. 304 ; Driffield, E. M. COLE, pp. 304, 305 ; Oldham Corporation Waterworks Drainage Area, W. WATTS, pp. 305-307 ; Robin Hood's Bay, S. CHADWICK and C. BROWNRIDGE, p. 308 ; Marton-cum-Grafton, Staveley, Arkendale and Claro Hill, E. P. KNUBLEY, pp. 308, 309 ; Whitby and Runswick, W. GREGSON, p. 310 ; Southburn, R. MORTIMER, p. 310 ; *Naturalist*, pp. 293-313 ; also *Research*, vol. i., pp. 161, 162, 231.
- 9 ——— At the Foot of the Wolds. [Brough and Elloughton]. *Naturalist*, pp. 179-182.
- 10 ——— The Yorkshire Naturalists' Union at Holmfirth. *Naturalist*, pp. 204-206 ; *Research*, vol. ii., p. 23.
- 11 ——— Geological Photography. *Research*, Aug., p. 27.
- 12 ——— The Yorkshire Naturalists' Union at Harrogate. [Nidd, Clint, and Ripley]. *Naturalist*, pp. 240-243 ;

- Research*, vol. ii., pp. 69, 70 ; *Trans. Leeds Geol. Assoc.*, part 4, pp. 68-71.
- 13 ADAMSON, S. A.—The Yorkshire Naturalists' Union in Upper Teesdale. *Naturalist*, 1889, pp. 285-290 ; *Research*, vol. ii., pp. 188, 189.
- 14 A[DAMSON], S. A.—Scientific Aspects of Health Resorts, V. The Geology of Scarborough and District. *Research*, vol. ii., pp. 52-55. VI., Bridlington and District, *Ibid.*, pp. 80-82 ; VII., Whitby and District, *Ibid.*, pp. 102-104.
- 15 ADAMSON, S. A. and ALFRED HARKER.—Bibliography . . . North of England. Geology and Palæontology. 1887. *Naturalist*, Feb.-March, pp. 61-77.
- 16 BAKER, J. G.—North Yorkshire. Ed. 2, pt. 2, *Trans. Yorks. Nat. Union*, pt. 12, pp. 49-144 and 2 maps. *Leeds*.
- 17 — [See 1888].
- 18 BALDERSTON, R. R.—The Succession of the Silurian Rocks of Ingleton and the included Trap-Dykes of most interest. *Naturalist*, pp. 131-142.
- 20 BEVAN, G. P.—Tourist's Guide to the West Riding. Ed. 5. [See 1877].
- 19 BINNIE, A. R. and TIDY, —.—Proposed new Waterworks [for Bradford]. *Report of the Waterworks Consulting Sub-Committee*. 8vo. 140 pp.
- 21 BOYLE, J. R.—The lost towns of the Humber ; with an introductory chapter of the Roman Geography of South East Yorkshire. Pp. xii., 102. *Hull*.
- 22 BROWNRIDGE, C.—[See S. A. Adamson].
- 23 BUCKMAN, S. S.—A Monograph of the Inferior Oolite Ammonites of the British Islands. Pt. 3. [Yorkshire species noted, pp. 83, 86]. Pp. 57-144 ; plates xv.-xxiii., and plate A. *Monogr. Pal. Soc.*, vol. xlii., for the year 1888.
- 24 — On the Cotteswold, Midford, and Yeovil Sands, and the Division between the Lias and Oolite. [Yorkshire, p. 471]. *Quart. Journ. Geol. Soc.*, vol. xlv., pp. 440-474.
- 25 — and J. F. WALKER.—On the Spinose Rhynchonellæ (Genus *Acanthothyris* d'Orbigny), found in England. [*A. spinosa*, from Crambeck, *A. crossi*, from Brough, and *A. senticosa* var. *fileyensis*, from Filey]. *Ann. Rep. Yorks. Phil. Soc.*, for 1888, pp. 41-57.

- 26 CARTER, W. L.—Excursion to Garforth and Newthorpe, pp. 51-53. South Milford and Sherburn, pp. 54-56. Brough and Elloughton, pp. 56-59. Giggleswick and Longcliffe, pp. 59-61. 'Haddockstones' and District, pp. 62-65. Holme Valley, pp. 65-67. Hebden Bridge and Crimsworth Dean, pp. 67, 68. Ripley, pp. 68-71. Upper Teesdale, pp. 71-76. Eccleshill, pp. 76, 77. *Trans. Leeds Geol. Assoc.*, pt. 5.
- 27 CHADWICK, S.—[See S. A. Adamson].
- 28 CLARKE, F. W.—The Shepard Collection of Meteorites deposited in the National Museum by Prof. Charles Upham Shepard. [Includes that which fell at Wold Cottage, Dec. 13th, 1795]. *Ann. Rep. Smithsonian Inst.* for 1885-86, pt. 2, p. 263.
- 29 COLE, E. M.—The Yorkshire Naturalists' Union at Robin Hood's Bay. *Naturalist*, pp. 227-232; Kirkham Abbey, pp. 343, 344.
- 30 ——— Notes on the Ancient Entrenchments in the neighbourhood of Wetwang. *Proc. Yorks. Geol. Soc.*, vol. xi., pt. 1, pp. 45-53.
- 31 ——— Geology of Yorkshire. [Abstract of a lecture to the Sheffield Field Naturalists' Society]. *Research*, Nov. vol. ii., p. 115.
- 32 ——— Excursion to Acklam Brow. *Research*, vol. ii., p. 22.
- 33 — [Cole, E. M.]. [Yorkshire Cretaceous Rocks, Report of Address on]. *Research*, June, p. 231.
- 34 ——— [See S. A. Adamson].
- 35 CORDEAUX, J.—Shap Granite Boulder near Spurn. *Naturalist*, p. 355.
- 36 CROSSKEY, H. W.—Sixteenth Report . . . on Erratic Blocks. [Ingleby Greenhow, Stillington, Cundall, North Otterington, Thornton le Moor, Baldersby, pp. 101-114]. *Rep. Brit. Assoc.* for 1888, pp. 101-124.
- 37 DAKYNS, J. R., R. H. TIDDEMAN, J. LUCAS, C. FOX-STRANGWAYS, W. H. DALTON.—Sheet 92 N. E. (Pateley Bridge, Burnsall, Grassington) of the Map of the Geological Survey of England and Wales (1 inch to 1 mile).
- 38 DALTON, W. H.—A list of Works referring to British Mineral and Thermal Waters. 8vo. *London. Rep. Brit. Assoc.* for 1888.



- 39 DALTON, W. H.—[See J. R. Dakyns].
- 40 DAVIS, R. H.—Harrogate as a Health Resort. (' Harrogate and its Spas ' on outside cover). Pp. 14. 8vo *Harrogate*.
- 41 DAVIS, J. W.—History of Yorks. Geol. and Polyt. Soc., forming vol. x., of its *Proceedings*. Pp. 489.
- 42 ——— The Lake-Dwellings in East Yorkshire. *Proc. Yorks. Geol. Soc.*, vol. xi., pt. 1, pp. 101-113.
- 43 DE RANCE, C. E.—Notes on the Vale of Clwyd Caves. [Victoria Cave, Settle]. *Proc. Yorks. Geol. Soc.*, vol. xi., pt. 1, pp. 1-20.
- 44 DONALD, MISS J.—Descriptions of some New Species of Carboniferous Gasteropoda. [*Murchisonia turriculata*, from Askrigg]. *Quart. Journ. Geol. Soc.*, vol. xlv., pp. 619-625; *Geol. Mag.*, dec. iii., vol. vi., p. 380.
- 45 FIELD, J.—Excursion to the Holme Valley. *Trans. Leeds Geol. Assoc.*, pt. 4, pp. 65-67.
- 46 FITTON, W. H.—' One of Nature's Gems.' What is Coal? *Research*, vol. ii., p. 45.
- 47 FOSTER, M.—Geology of South East Yorkshire, with remarks on the Great Ice Age. Pp. 24. 12mo. *Market Weighton*.
- 48 FOX-STRANGWAYS, C.—[See J. R. Dakyns].
- 49 GARDNER, J. STARKIE.—A Correction—Mesozoic Monocotyledon [object figured and described as fruit from the Yorkshire Oolites proved to be a Volcanic bomb from Ascension!]. *Geol. Mag.*, March, p. 144. [See also *loc. cit.* 1886].
- 50 GOODCHILD, J. G.—On some of the Modes of Formation of Coal Seams. (Abstract). *Proc. Roy. Phys. Soc., Edin.*, vol. x., pt. 1., pp. 97-100. *Geol. Mag.*, dec. ii., vol. vi., pp. 308-315. *Coll. Guard*.
- 51 GREGSON, W.—[See S. A. Adamson].
- 52 HARDCASTLE, C. D.—The Physical Features of Ingleton. *Trans. Leeds Geol. Assoc.*, pt. 5, pp. 16-26.
- 53 HARKER, ALFRED.—[See S. A. Adamson].
- 54 HOLGATE, B.—On the Magnesian Limestones of Yorkshire. [Abstract of a Lecture]. *Trans. Leeds Geol. Assoc.* for 1888, part 4, pp. 182-184.
- 55 ——— Excursion to Garforth and Newthorpe. *Ibid.*, pp. 51-53.

- 56 HOLGATE, B.—Excursion to Milford and Sherborn. *Trans. Leeds Geol. Assoc.* for 1888, part 4, pp. 54-56.
- 57 ——— Excursion to Brough and Elloughton. *Ibid.*, pp. 56-59.
- 58 HOWSE, R.—Contributions towards a Catalogue of the Flora of the Carboniferous System of Northumberland and Durham. Pt. 1. Fossil Plants of the Hutton Collection. [*Asterophyllites* sp. and *Calamites regularis*, from Low Moor, pp. 41, 126. Five Jurassic species from the Yorkshire Coast, pp. 142, 143]. *Trans. Northumberland, Durham Nat. Hist. Soc.* for 1888, vol. x., pp. 19-151.
- 59 ——— Natural History Society of Northumberland, Durham, and Newcastle-upon-Tyne. Guide to the Collections of local fossils in the Museum of the Natural History Society, Barras Bridge, Newcastle-upon-Tyne. Pp. 62. 8vo. *Newcastle.*
- 60 HUDLESTON, W. H.—On the Geological History of Iron Ores. [Rosedale and Cleveland ores]. *Proc. Geol. Assoc.*, vol. xi., pp. 104-144.
- 61 ——— A Monograph of the British Jurassic Gasteropoda. Pt. 1. No. 3. Gasteropoda of the Inferior Oolite. [Yorkshire, pp. 146, 147, 148, 149, 150, 151, 153, 159, 166, 180, 190, 192]. Pp. 137-192; plates vii.-xi. *Monogr. Pal. Soc.*, vol. xlii., for the year 1888.
- 62 JEFFS, O. W.—Provisional List of Geological Photographs, arranged according to Counties. *Research*, vol. ii., Dec. pp. 138, 139, continued, pp. 158-159, Jan. 1890.
- 63 JONES, E.—On the recent Exploration of a Cave at Elbolton, near Thorpe. *Proc. Yorks. Geol. Soc.*, vol. xi., pt. 1, pp. 86-90.
- 64 KIDSTON, R.—Additional Notes on Some British Carboniferous Lycopods [*Bothrodendron minutifolium*, from Barnsley, etc.]. *Proc. R. Phys. Soc., Edinburgh*, vol. x., pt. 1, pp. 88-97.
- 65 KUNBLEY, E. P.—[See S. A. Adamson].
- 66 LAMPLUGH, G. W.—On a New Locality for the Arctic Fauna of the 'Basement' Boulder Clay in Yorkshire. [South Sea Landing, Flamborough]. *Newcastle Daily Chronicle*, Sept. 18th. [See also under 1890].

- 67 LAMPLUGH, G. W.—On the Subdivisions of the Speeton Clay. *Quart. Journ. Geol. Soc.*, vol. xlv., pp. 575-618 ; *Research*, vol. ii., p. 23. *Geol. Mag.*, pp. 233-4 ; *Phil. Mag.*, pp. 429-30.
- 68 ——— Report of the Committee . . . appointed for the purpose of investigating an Ancient Sea-beach near Bridlington Quay. *Rep. Brit. Assoc.* for 1888, pp. 328-338.
- 69 ——— Report of the Committee . . . appointed for the purpose of investigating an Ancient Sea-beach near Bridlington Quay. *Newcastle Daily Chron.*, Sept. 18th, 1889 ; *Rep. Brit. Assoc.* for 1889, pp. 70, 71.
- 70 ——— Bored Stones in Boulder-Clays. *Nature*, vol. xl., pp. 297, 298.
- 71 LEBOUR, G. A.—Official and Local Guide. [British Association Meeting at Newcastle]. Geology and Natural History. Pp. viii.+219. *Newcastle*.
- 72 ——— [See J. Marley].
- 73 LUCAS, J.—[See J. R. Dakyns].
- 74 LYDEKKER, R.—Catalogue of the Fossil Reptilia and Amphibia in the British Museum. Pt. 1-4. 8vo. *London*. 1888-90.
- 75 MARLEY, J., and G. A. LEBOUR.—Sketch of the Rise and Progress of the Cleveland and South Durham Salt Industry, and on the extension of the Durham Coalfield. *Newcastle Daily Chron.*, Sept. 17th ; *Trans. Fed. Inst. Eng.*, vol. i., pp. 339-372, Discussion, p. 373, 1890 ; *Rep. Brit. Assoc.* for 1889 (title only).
- 76 MORTIMER, R.—[See S. A. Adamson].
- 77 NIKITIN, S.—Quelques Excursions dans les Musées et dans les terrains mésozoïques de l'Europe occidentale. [Speeton Clay compared with the 'Volga beds' of Russia]. *Bull. Soc. Geol. Belg.*, t. iii., pp. 29-58, and 8vo ; *St. Petersburg* ; also abstract in *Quart. Journ. Geol. Soc.*, vol. xlv., p. 608.
- 78 PAVLOW, A.—Etudes sur les couches Jurassiques et Crétacées de la Russie : 1, Jurassique supérieur et Crétacé inférieur de la Russie et de l'Angleterre. [Speeton and Russian succession compared]. *Bull. Soc. Imp. Nat. Moscow*, pp. 61-127, 176-179. Abstract, *Geol. Mag.*,

- dec. iii., vol. vi., pp. 520-521 ; Note, *Quart. Journ. Geol. Soc.*, vol. xlv., pp. 608, 609.
- 79 PERFECT, W. G.—Excursion to Giggleswick and Langcliffe. *Trans. Geol. Assoc.*, pt. 4, pp. 59-61.
- 80 READE, T. M.—Physiography of the Lower Trias. *Geol. Mag.*, dec. iii., vol. vi., pp. 549-558, vol. vi., pp. 155-157, 260-263 (1890) ; *Research*, Oct., vol. ii., p. 78 ; *Newcastle Daily Chron.*, Sep. 13th ; *Rep. Brit. Assoc.* for 1889, pp. 566, 567.
- 81 REID, E. W.—[See Anon].
- 82 SPENCER, J.—On the occurrence of a Boulder of Granitoid Gneiss ; or, Gneissoid Granite in the Halifax Hard Bed Coal. *Proc. Yorks. Geol. Soc.*, vol. xi., pt. 1, pp. 96-100 ; *Rep. Brit. Assoc.*, for 1888 pp. 661, 662.
- 83 ——— Excursion to Hebden Bridge and Crimsworth Dean. *Trans. Leeds Geol. Assoc.*, pt. 4, pp. 67, 68.
- 84 SPEARS, —.—Report to the Local Government Board upon the Prevalence of Diphtheria in the Penistone Registration Sub-District, and upon certain Occurrences therein of Enteric Fever. Pp. 12. *Local Government Board Report*. (No. 46). Fol. London.
- 85 SPIERS, W.—Some Remarkable Fossils : iii. Corals. [Scarborough]. *Wesley Nat.*, April, pp. 37-40 ; iv. Sea-Lilies, l.c., pp. 178-182.
- 86 STOCK, W. F. K.—[See S. A. Adamson].
- 87 STUR, D.—Momentaner Standpunkt meiner Kenntnisse über die Steinkohlen-formations Englands. *Jahrb. d. k.-k. Geol. Reich.*, Bd. xxxix., pp. 1-20 ; Abstracts, *Geol. Mag.*, dec. iii., vol. vi., pp. 457, 458 ; *Neu Jahrb. für Min.*, 1890, vol. i., pp. 296, 297.
- 88 SUMMERFIELD, R. A.—[See S. A. Adamson].
- 89 SUTCLIFFE, F. W.—Coal. *Wesley Nat.*, vol. 2, pp. 356-359.
- 90 TATE, A. N.—Scientific Aspects of Health Resorts. 1. Harrogate. *Research*, vol. i., pp. 5-7.
- 91 TIDDEMAN, R. H.—[See J. R. Dakyns].
- 92 TIDY.—[See A. R. Binnie].
- 93 TUTE, J. S.—Excursion to 'Haddockstones' [near Markington] and District. *Trans. Leeds Geol. Assoc.*, pt. 4, pp. 62-65.

- 63 UPHAM, W.—The Work of Prof. Henry Carvill Lewis in Glacial Geology. *Geol. Mag.*, dec. iii., vol. vi., pp. 155-160.
- 64 VINE, G. R.—A Monograph of Yorkshire Carboniferous and Permian Polyzoa. [Bibliography]. *Proc. Yorks. Geol. Soc.*, vol. xi., pt. 1, pp. 68-85.
- 65 WALKER, J. F.—On Oolitic Brachiopoda new to Yorkshire. *Ann. Rep. Yorks. Phil. Soc.*, for 1888, pp. 37-40.
- 66 ——— [See S. S. Buckman].
- 67 WATTS, W.—Distribution of Erratics and Boulder Clay on the Lower Portion of the Drainage Areas of the Oldham Corporation Waterworks. *Naturalist*, pp. 305-307. [See 1888].
- 68 ——— [See S. A. Adamson].
- 69 WILLIAMSON, W. C.—On the Organisation of the Fossil Plants of the Coal-Measures, pt. 15 [from Halifax]. *Phil. Trans.*, vol. clxxx., B., pp. 155-168.
- 70 WOODWARD, A. S.—Catalogue of the Fossil Fishes in the British Museum (Natural History). Pts. 1-4, 1889, 1891, 1895, 1901. 8vo. *London*.
- 71 ——— Palæontology in the Malton Museum. *Geol. Mag.*, dec. iii., vol. vi., pp. 361-363.
- 72 WRIGHT, G. F.—The Ice Age in North America and its bearing upon the Antiquity of Man. [Yorkshire, pp. 394-400]. 8vo. *New York*. 8vo. *London*, 1890.
- 73 YOKOYAMA, M.—Jurassic Plants from Kaga, Hida, and Echizen. [Compared with the flora of the Inferior Oolite of Yorkshire]. *Journ. Coll. Sci. Imp. Univ. Japan*; also *Bull. Geol. Soc., Japan*. Pt. B., vol. i., pp. 1-10.

1890.

- 1 ANON —The Salt Industry of Yorkshire and Durham. [Notices the presence of brine at several places in Yorkshire]. *Coll. Guard.*, vol. lx., p. 360.
- 2 ——— Yorkshire Stone: Halifax District. *Builder*, March 29th, vol. lviii., pp. 221-224, 277-281.
- 3 ——— Reports of the Inspectors of Mines. *Parliamentary Report*. Fol. *London*.
- 4 ——— Opening out of a new Coalfield in Yorkshire [near Drax, borehole at Carlton Towers]. *Yorkshire Post and Eastern Morning News*, Sept. 27th.

- 5 ANON.—The Salt Industry of Yorkshire and Durham. *Coll. Guard.*, vol. lx., p. 360.
- 6 ——— Ancient Relics : British and Roman [remains of Red Deer and Fallow Deer at Skipsea]. *Yorks. Notes and Queries*, pt. 19, April, p. 270.
- 7 ——— [Excursion to] Ingleton. *Trans. Liverpool Geol. Assoc.*, vol. ix., pp. 61, 62.
- 8 ——— The Harrogate Pictorial. [Geology, pp. 9, 57, 58]. Pp. 64. 4to. *London*.
- 9 ——— Donations [to Museum at Newcastle ; includes many Yorkshire specimens]. *Nat. Hist. Trans. Northumb., Durham and Newcastle*, vol. x., pt. 2, p. 293 and pp. 315-6.
- 10 ——— Yorkshire Naturalists' Union, Geological Section [work of]. *Research*, Feb., p. 188.
- 11 ——— The late Mr. S. A. Adamson, F.G.S. *Research*, April, pp. 228-230.
- 12 ——— Opening Out of a New Coalfield in Yorkshire. [Decision to sink a shaft near Drax]. *Yorkshire Post and Eastern Morning News*, Sept. 27th.
- 13 ——— ——— Scientific Research in Yorkshire. *Ibid.*, pp. 200-202.
- 14 ——— [J. T. M.].—Gannister. [Section at Halifax]. *Coll. Guard.*, vol. lix., p. 171.
- 15 S. A. A[DAMSON].—Scientific Aspects of Health Resorts. V., The Geology of Scarborough and District, pp. 52-55 ; VI., Bridlington and District, pp. 80-82 ; VII., Whitby and District, pp. 102-104 ; IX., Saltburn and District. *Research*, vol. ii., pp. 188-151.
- 16 ADAMSON, S. A. and A. HARKER.—Bibliography : Papers and Records published with respect to the Natural History and Physical Features of the North of England, Geology and Palæontology. 1888. *Naturalist*, pp. 339-350.
- 17 BAILEY, GEO.—[See H. W. Burrows].
- 18 BAKER, J. G.—[See 1888].
- 19 BALDERSON, ROBERT R.—The Cambrian Rocks and Silurian Base of Ewcross, Dufton, and Shap Wells, *Lancaster*. Pp. 25 (privately printed). [See review in *Naturalist*, Feb., 1891, pp. 63-4].

- 20 BARRY, F. W.—Report on the General Sanitary Condition of the Sculcoates Rural Sanitary District. (No. 53). Pp. 18. *Local Government Board Report*. Fol. London.
- 21 ——— Report to the Local Government Board on the General Sanitary Condition of the Easingwold Rural Sanitary District. (No. 55). Pp. 14. *Local Government Board Report*. Fol. London.
- 22 BECKWITH, B. S.—A Ten-Days' Driving and Walking Tour in the North-west Yorkshire Dales. [Brief geological notes]. Pp. 24. *Darlington*.
- 23 BELL, T.—On the Middlesborough Salt Works, and the Recent Boring on the Lackenby Foreshore Estate. *Trans. Manchester Geol. Soc.*, vol. xx., pp. 355-560, Discussion, pp. 560, 561.
- 24 BONNEY, T. G.—Mr. Mellard Reade's Interpretation of the Lower Trias Physiography. *Geol. Mag.*, dec. iii., vol. vii., pp. 52-55. [See also pp. 235-237].
- 25 BOTHAMLEY, C. H.—The Sulphur Waters of Yorkshire. [Harrogate and Askern]. *Leeds Mercury*, Sept. 9th, 1890; *Rep. Brit. Assoc.* for 1890, p. 779 (1891).
- 26 BUCKMAN, S. S.—A Monograph of the Inferior Oolite Ammonites of the British Islands. Pt. 4. [*Grammoceras striatutum*, *G. orbigny*, from Peak, pp. 175, 188]. Pp. 145-224; plates xxiv.-xxxvi.; *Monogr. Pal. Soc.*, vol. xliii., for the year 1889.
- 27 BURROWS, H. W., C. D. SHERBORN, and G. BAILEY.—The Foraminifera of the Red Chalk of Yorkshire, Norfolk, and Lincolnshire [Speeton, etc.]. Includes a Report on a Collection of Microscopic Sections of Red Chalk and Gault belonging to Mr. W. Hill. *Journ. Roy. Mic. Soc.*, pp. 549-566.
- 28 CASH, W.—[See W. C. Williamson].
- 29 CHADWICK, S.—The Yorkshire Naturalists' Union at Lowthorpe, near Driffield. Geological Report. *Naturalist*, pp. 208, 209; *Trans. Leeds Geol. Assoc.*, pt. 6 pp. 77-79 (1891).
- 30 CHEETHAM, W.—On a Boulder with Cup and Ring Markings at Horsforth. [A boulder of Millstone Grit]. *Proc. Yorks. Geol. Soc.*, vol. xi., pt. 2, pp. 175-177.
- 31 ——— A Geological Tour through Durham into Cumberland Research, April, pp. 238-9.

- 32 COIGNOU, MISS.—On a new species of *Cyphaspis* from the Carboniferous Rocks of Yorkshire. [Buttershaw, near Cracoe]. *Quart. Journ. Geol. Soc.*, vol. xlv., pp. 421, 422.
- 33 COLE, E. M.—Coast Erosion in Yorkshire. *Research*, vol. ii., pp. 225, 226.
- 34 ——— Excursion to Lowthorpe. *Naturalist*, pp. 208-9.
- 35 ——— Notes on the Driffield and Market Weighton Railway. *Proc. Yorks. Geol. Soc.*, vol. xi., pt. 2, pp. 170-175.
- 36 ——— On a Bed of Peat overlying a Lacustrine Deposit near Filey. *Yorkshire Post*, *Leeds Mercury*, and *Times*, Sept. 11th; *Naturalist*, 1891, pp. 17-19.
- 37 COOK, J. TRAVIS.—[See J Travis-Cook].
- 38 ——— In Memoriam. Samuel Arthur Adamson, F.G.S. *Naturalist*, April, pp. 117-9.
- 39 CRICK, G. C.—[See A. H. Foord].
- 40 CROSSKEY, H. W.—Seventeenth Report . . . on Erratic Blocks . . . [Yorkshire, pp. 115-126]. *Rep. Brit. Assoc. for 1889*, pp. 115-127.
- 41 DAKYNS, J. R.—On the Changes of the Lower Carboniferous Rocks in Yorkshire from South to North. *Yorkshire Post*, Sept. 6th; *Rep. Brit. Assoc. for 1890*, pp. 811, 812 (1891); *Proc. Yorks. Geol. Soc.*, vol. xi., pt. 3, pp. 353-362.
- 42 ——— R. H. TIDDEMAN, W. GUNN, and A. STRAHAN —The Geology of the Country around Ingleborough, with parts of Wensleydale and Wharfedale. Explanation of Quarter Sheet 97 S.W. (N.S. 50). *Memoirs of the Geological Survey*. 8vo. London.
- 43 DAVIS, J. W.—On *Cælacanthus phillipsii* Agassiz. [Lower Coal-Measures, Halifax]. *Geol. Mag.*, dec. iii., vol. vii., pp. 159-161.
- 44 ——— On the Dentition of *Pleuroplax* (*Pleuroodus*), A. S. Woodward. [Better-Bed Coal, Halifax]. *Ann. Mag. Nat. Hist.*, ser. 6, vol. v., pp. 291-294.
- 45 ——— On Fossil Fish of the West Riding Coalfield. *Yorkshire Post*, Sept. 10th; *Rep. Brit. Assoc. for 1890*, pp. 822, 823 (1891).
- 46 ——— The Yorkshire Naturalists' Union at Bretton Park. Geological Report. *Naturalist*, pp. 226, 227; *Trans. Leeds Geol. Assoc.*, pt. 6, pp. 79, 80. 1891.



- 47 DAWKINS, W. B.—[Caverns and Subterranean Streams round Ingleborough, mentioned in discussion on a paper by M. Stirrup]. *Trans. Manchester Geol. Soc.*, vol. xx., pt. 16, p. 456.
- 48 DE RANCE, C. E.—Fifteenth Report . . . On Underground Water . . . [Yorkshire and Durham, pp. 80-84]. *Rep. Brit. Assoc.*, for 1889, pp. 71-84.
- 49 — Notes on Underground Water Supply and River Floods. *Proc. Yorks. Geol. Soc.*, vol. xi., pt. 2, pp. 200-216.
- 50 EASTERFIELD, T. H., and J. M. WILSON.—The River Aire—a study in River Pollution. *Leeds Mercury and Yorkshire Post*, Sept. 9th.
- 51 FAIRBANK & SONS.—Engineers' Report on the Malton Water Supply. Pp. 17. 8vo. *Malton*.
- 52 FOORD, A. H., and G. C. CRICK.—Descriptions of new and imperfectly-defined species of Jurassic Nautili contained in the British Museum (Natural History). [Kellaways Rock, Scarborough, also p. 399]. *Ann. Mag. Nat. Hist.*, Ser. 6, vol. v., pp. 270-290, 388-409.
- 53 FOSTER, M.—Geology of South-east Yorkshire, with remarks on the Great Ice Age. Pp. 24. 12mo. *Market Weighton*. [No date].
- 54 GOODCHILD, J. G.—An Outline of the Geological History of Upper Swaledale. *Naturalist*, pp. 243-247.
- 55 — Notes on some Observed Rates of Weathering of Limestones. [Kirkby Stephen, Askrigg]. *Geol. Mag.*, dec. iii., vol. vii., pp. 463-466.
- 56 GRANTHAM, R. F.—Notes on Water Supply. [Scarborough, p. 223]. *Trans. Sanitary Inst.*, vol. x., pp. 222-228, Discussion, pp. 228-230.
- 57 'GRAY, JOHNNIE' [Harry Speight].—One Hundred and Eighty Pleasant Walks around Bradford; including a Notice of the Town and its Public Buildings; also a Short Sketch and History of Forty-Six Villages, and complete Guide to the District, six to ten miles around Bradford. [Geology, pp. ix., x.]. Pp. 188. 8vo. *Bradford*.
- 58 GUNN, W.—[See J. R. Dakyns].

- 59 HARKER, A.—Petrological Notes on some Boulders from the Boulder-Clays of East Yorkshire. Appendix to paper by G. W. Lamplugh. *Proc. Yorks. Geol. Soc.*, vol. xi., pt. 2, pp. 300-307.
- 60 ——— Notes on North of England Rocks. III. [Yorkshire Coast, Brough, Malton]. *Naturalist*, pp. 300-304.
- 61 ——— [See S. A. Adamson].
- 62 HATCH, F. H.—On some West Yorkshire Mica-trap Dykes. [Sedbergh district]. *Yorkshire Post and Leeds Mercury*, Sept. 9th; *Rep. Brit. Assoc. for 1890*, pp. 813, 814.
- 63 HAWELL, J.—The Yorkshire Naturalists' Union at Kildale-in-Cleveland. [Geology, pp. 274-276]. *Naturalist*, pp. 269-276; *Leeds Mercury*, July 17th, and *Yorkshire Weekly Post*, July 19th; *Trans. Leeds Geol. Assoc.*, pt. 6, pp. 85-87.
- 64 HEY, W. C.—Exposure of Lower Lias at Redcar. *Naturalist*, p. 149.
- 65 HINDE, G. J.—On a new Genus of Siliceous Sponges from the Lower Calcareous Grit of Yorkshire. [*Raxella perforata*]. *Quart. Journ. Geol. Soc.*, vol. xlv., pp. 54-61; *Ann. Mag. Nat. Hist.*, Ser. 6, vol. v., p. 254.
- 66 HOLGATE, B.—The Carboniferous Strata of Leeds and its immediate Suburbs. *Yorkshire Post and Leeds Mercury*, Sept. 5th.
- 67 ——— Some Physical Properties of the Coals of the Leeds District. *Yorkshire Post*, Sept. 5th.
- 68 ——— Some Physical Properties of Coal. *Proc. Yorks. Geol. Soc.*, pp. 460-468.
- 69 HOWELL, H. H.—Note on the Classification of the Red Rocks in South-East Durham; and on a possible unconformity between the Trias and the Permian Limestone in the same District. [Section at Eston]. *Geol. Mag.*, dec. iii., vol. vii., pp. 8-13.
- 70 HOWSE, R.—Note on the South Durham Salt Borings, with remarks on the Fossils found in the Magnesian Limestone Cores, and the Geological Position of the Salt. [Comparison with South Yorkshire beds]. *Trans. Northumberland Durham Nat. Hist. Soc.*, vol. x., pt. 2, pp. 220-226.

- 71 HOWSE, R.—Catalogue of the Local Fossils in the Museum . . . at Newcastle-on-Tyne. *Nat. Hist. Trans. Northmb., Durham and Newcastle.* Vol. x., pt. 2, pp. 227-288.
- 72 HUDLESTON, W. H.—A Monograph of the British Jurassic Gasteropoda. Pt. 1. No. 4. Gasteropoda of the Inferior Oolite. [Yorkshire, pp. 204, 211, 214]. Pp. 193-224; plates xii.-xvi. *Monogr. Pal. Soc.*, vol. xliii for 1889.
- 73 HULL, E.—On the probable Average Depth at which Coal is now being worked in the British Isles. [Average depth in Yorks., Derbys., and Notts., p. 419]. *Trans. Manchester Geol. Soc.*, vol. xx., pt. 14, pp. 417-420, Discussion, pp. 420-425, 464-471.
- 74 JEFFS, OSMOND W.—Provisional List of Geological Photographs, arranged according to Counties [48 Yorkshire photographs]. *Research*, Jan., p. 158. [See 1889].
- 75 JONES, E.—The Exploration of Elbolton Cave [near Thorpe, nine miles north of Skipton]. *Leeds Mercury, Yorkshire Post*, and *Times*, Sept. 9th; *Rep. Brit. Assoc.* for 1890, pp. 817, 818.
- 76 ——— On Further Exploration of a Cave at Elbolton, near Thorpe, in Craven. *Proc. Yorks. Geol. Soc.*, vol. xi., pt. 2, pp. 307-310.
- 77 JUKES-BROWNE, A. J.—The Physiography of the Lower Trias. *Geol. Mag.*, dec. iii., vol. vii., pp. 220, 221.
- 78 KIDSTON, R.—The Yorkshire Carboniferous Flora. First Report on behalf of the Yorkshire Carb. Flora Committee. *Trans. Yorks. Nat. Union*, pt. 14, for 1888, pp. 1-64. [See also 1893, 1896, 1898].
- 79 LAMPLUGH, G. W.—On the Boulders and Glaciated Rock-surfaces of the Yorkshire Coast. *Yorkshire Post*, Sept. 5th. [See also under 1891].
- 80 ——— East Yorkshire during the Glacial Period. *Leeds Mercury*, Sept. 5th. [See also under 1891].
- 81 ——— The Neocomian Clay at Knapton. *Naturalist*, pp. 336-338.
- 82 ——— On the Larger Boulders of Flamborough Head. Pts. 2 and 3. *Proc. Yorks. Geol. Soc.*, vol. xi., pt. 2, pp. 231-239.
- 83 ——— Glacial Sections near Bridlington. *Ibid.*, pp. 275-300. Appendix, by A. HARKER, pp. 300-307.

- 84 LAMPLUGH, G. W.—On a New Locality for the Arctic Fauna of the "Basement" Boulder Clay in Yorkshire. *Rep. Brit. Assoc.*, for 1889, pp. 590-1; *Geol. Mag.*, pp. 61-70.
- 85 LUBBOCK, J.—Prehistoric Times. Ed. 5. [See 1865].
- 86 LYDEKKER, R.—Catalogue of the Fossil Reptilia and Amphibia in the British Museum. Pts. 1-4. 8vo. London. 1888-90.
- 87 MARR, J. E.—The Connexion betwixt Yorkshire and Scandinavia. *Naturalist*, pp. 145-148.
- 88 MEADLEY, C.—Memorials of Scarborough [brief reference to Spa Waters, etc.]. London and Scarborough, pp. xvi.+294.
- 89 MIALL, L. C.—Airedale: its Scenery, Historic Sites, Geology, and Natural History. (British Association Handbook for Leeds). 8vo. Pp. 1-42. Leeds.
- 90 MITCHELL, T. C.—On the Drift Deposits of the Vale of Mowbray. *Proc. Yorks. Geol. Soc. for 1889*, vol. xi. pt. 2, pp. 177-182.
- 91 MUNRO, R.—The Lake Dwellings of Europe: being the Rhind Lectures in Archæology for 1888. [Holderness]. Pp. xl.+600.
- 92 NEVIN, J.—On the Difference between the Seams in the Northern and Southern Parts of the Yorkshire Coalfield as shown in some of the deeper sinkings. [Depths at several collieries]. *Trans. Midl. Inst. Eng.*, vol. xii., 1889-91, pp. 123-128, Discussion, pp. 129-134; *Trans. Fed. Inst. Min. Eng.*, vol. i., pp. 215-220, 233-238.
- 93 READE, T. M.—Physiography of the Lower Trias. [See 1889].
- 94 RÜCKER, A. W.—On the Relation between the Magnetic Permeability of Rocks and Regional Magnetic Disturbances. [Vale of York, pp. 528, 529]. *Proc. Roy. Soc.*, vol. xlviii., pp. 505-535.
- 95 ——— Underground Mountains. *Rep. Brit. Assoc.*, for 1889, pp. 586-7; *Good Words*, pp. 191-6.
- 96 ——— and T. E. THORPE.—Preliminary Note on Supplemental Magnetic Surveys of Special Districts in the British Isles. [Greatest vertical force of Market Weighton and Harrogate, p. 587]. *Proc. Roy. Soc.*, vol. xlvii., pp. 443-445.

- 97 RÜCKER, A. W. and T. E. THORPE.—On the relations between the Geological Constitution and the Magnetic State of the British Isles. *Rep. Brit. Assoc.* for 1889, pp. 586-587 ; under different title ; *Nature*, vol. lxi., p. 598.
- 98 RUSSELL, R.—The Geology of the Southern Portion of the Yorkshire Coalfield. [Sections of Collieries]. *Trans. Fed. Inst. Mining Eng.*, vol. i., 1889-90, pp. 101-121.
- 99 SHERBORN, C. D.—Report on a Collection of Microscopical Sections of Red Chalk and Gault belonging to Mr. W. Hill. [Speeton, etc.]. *Journ. Roy. Mic. Soc.*, Oct., pp. 564-566.
- 100 ——— [See under H. W. Burrows].
- 101 ——— [See A. Smith Woodward].
- 102 SPEIGHT, H.—Discovery of a Bone-Cave at Skirethorns, near Grassington-in-Craven. *Naturalist*, p. 202.
- 103 ——— [See 'Johnnie Gray'].
- 104 SPIERS, W.—Rambles and Reveries of a Naturalist. [Hebden Bridge, Malton, and Whitby]. Pp. 256. 8vo. London.
- 105 STIRRUP, M.—[See W. B. Dawkins].
- 106 STRACHAN, A.—[See J. R. Dakyns].
- 107 STUR, D.—[See 1889].
- 108 TATE, T.—Yorkshire Petrology. Pt. 2. The Lamprophyres. *Proc. Yorks. Geol. Soc.*, vol. xi., pt. 2, pp. 311-316.
- 109 ——— On the so-called Ingleton Granite. *Yorkshire Post*, Sept. 5th ; *Proc. Yorks. Geol. Soc.*, vol. xi., pt. 3, pp. 480, 481.
- 110 ——— Note on Phillips' Dyke, Ingleton. *Yorkshire Post*, Sept. 9th.
- 111 THOMPSON, S. P.—The Sources of the River Aire. *Yorkshire Post* and *Leeds Mercury*, Sept. 10th. [See also under 1891].
- 112 THORPE, T. E.—[See A. W. Rücker].
- 113 TIDDEMAN, R. H.—On Concurrent Faulting and Deposit in Carboniferous Times in Craven, Yorkshire, with a Note on Carboniferous Reefs. *Rep. Brit. Assoc.* for 1889, pp. 600-603.
- 114 ——— Carboniferous Rocks in the Upper Aire Valley, and

- their Physical History. [Pp. 43-54 of the British Association Handbook for Leeds and Airedale]. 8vo. *Leeds*. See also *Leeds Mercury*, Sept. 8th. *Proc. Yorks. Geol. Soc.*, vol. xi., pt. 3, pp. 482-492.
- 115 ——— [See J. R. Dakyns].
- 116 TRAVIS-COOK, J.—Notes Relative to the Manor of Myton [with Chapter (pp. 183-198) on the Change in the Course of the River Hull]. *Hull*, pp. xvi.+220.
- 117 TUTE, J. S.—Excursion to the Haddockstones and District. *Trans. Leeds Geol. Assoc.*, pt. 5, pp. 62-65.
- 118 ——— Notes on some singular Cavities in the Magnesian Limestone. *Proc. Yorks. Geol. Soc.* for 1889, vol. xi., pt. 2, pp. 182-184.
- 119 USSHER, W. A. E., and others.—The Geology of Parts of North Lincolnshire and South Yorkshire. Explanation of Sheet 86. (N. S. 80, 81, 89, 90). *Geological Survey Memoir*. Pp. viii.+231. 8vo. *London*.
- 120 VINE, G. R.—A Monograph of Yorkshire Carboniferous and Permian Polyzoa. Pt. 2. *Proc. Yorks. Geol. Soc.*, vol. xi., pt. 2, pp. 184-200.
- 121 WATTS, WILLIAM.—Thermometrical Observations of Atmospheric Air and Water at Piethorn and Denshaw. *Trans. Manch. Geol. Soc.*, vol. 20, pt. 21, pp. 580-607.
- 122 WHEELER, W. H.—Bars at the Mouths of Tidal Estuaries. [Humber and Tees]. *Proc. Inst. Civ. Eng.*, vol. c., pp. 116-143, Discussion and Correspondence, pp. 144-216.
- 123 WILDING, J.—The Building Stones used in Liverpool. [Sandstone from Bradford, etc.]. *Trans. Liverpool Geol. Assoc.*, vol. ix., pp. 25-38.
- 124 WILLIAMS, J. W.—British Fossils and where to seek them. An Introduction to the Study of Past Life. Pp. 96. 8vo. *London*.
- 125 WILLIAMSON, W. C.—Our present knowledge of the Vegetation of the Carboniferous Age, and the further advancement of the study of the subject. *Trans. Manchester Geol. Soc.*, vol. xxi., pts. 4-5, pp. 156-166.
- 126 ——— On the Organisation of the Fossil Plants of the Coal-Measures. Pt. 16. [Species from Halifax]. *Phil. Trans.* vol. 180 B., pp. 195-214.

- 127 WILLIAMSON, W. C. and W. CASH.—Report of the Committee . . . to investigate the Flora of the Carboniferous Rocks of Lancashire and West Yorkshire. *Rep. Brit. Assoc.* for 1889, pp. 69, 70.
- 128 WILSON, E.—On the Durham Salt District. *Quart. Journ. Geol. Soc.*, vol. xliv., pp. 761-782 ; also *Research*, Dec., pp. 92-3 and 108-9.
- 129 WILSON, J. M.—[See T. H. Easterfield].
- 130 WOODWARD, A. S.—On the Palæontology of the Sturgeons. [*Gyrosteus mirabilis*, from Whitby]. *Proc. Geol. Assoc.*, vol. xi., pp. 24-44.
- 131 ——— The Fossil Sturgeon of the Whitby Lias. *Naturalist*, pp. 101-107.
- 132 ——— and C. D. SHERBORN.—A Catalogue of British Fossil Vertebrata. Pp. xxxv.+396. 8vo. *London*.
- 133 WRIGHT, G. FREDERICK.—The Ice Age in North America [includes Yorkshire Geology]. *London*. 8vo. pp. xv. +622. [See 1889].
- 134 YEO, J. B.—Climate and Health Resorts. Ed. 3, pp. xiv.+674. [See 1885].

## 1891.

- 1 ANON.—The Contest for the Coast. [Notices landslip at Scarborough Castle]. *Chambers' Journal*, April 18th, No. 381. Ser. 5. Vol. viii., pp. 241-243.
- 2 ——— Inland Watering Places: being descriptions of the Spas of Great Britain and Ireland, their Mineral Waters and their Medicinal Value . . . [Askern, p. 7 ; Boston Spa, p. 29 ; Croft, p. 76 ; Harrogate, p. 94 ; Ilkley, p. 105]. Pp. 211. 8vo. *London*.
- 3 ——— The Salt Industry of the North of England. [Middlesbrough]. *Coll. Guard.*, vol. lxi., pp. 207.
- 4 ——— Supposed Discovery of Natural Gas [struck at 760 feet while drilling for salt at Haverton Hill, near Middlesbrough]. *Ibid.*, p. 285.
- 5 ——— The explorations for Natural Gas near Middlesbrough. *Ibid.*, p. 533.
- 6 ——— The Coalfields of the United Kingdom. [Yorkshire, p. 309]. *Coll. Guard.*, vol. lxii.

- 7 ANON.—Geological Photographs Committee of the Yorkshire Naturalists' Union. *Naturalist*, Aug., p. 231.
- 8 ——— Reports of the Inspectors of Mines. *Parliamentary Report*. Fol. London.
- 9 ——— [M. E.]. The Yorkshire Coalfield. [Monkton Main Colliery, pp. 923, 924 ; The West Riding and Silkstone Collieries, pp. 967, 968, ; Tinsley Park Colliery, p. 1011]. *Coll. Guard.*, vol. lxii.
- 10 ATKINSON, J. C.—Forty Years in a Moorland Parish. [Danby in Cleveland: Geology, pp. 181-201, 395-400]. Pp. xi.+457. 8vo. London. Ed. 1, March. Ed. 2, May. Ed 3, 1907.
- 11 AYTOUN, R.—Securing the North Cliff, Scarborough. [Geological notes]. *Proc. Inst. Civ. Eng.*, vol. cv., pp. 295-297.
- 12 BARROW, G.—[See C. Fox-Strangways].
- 13 ——— [See H. H. Howell].
- 14 BEDFORD, J. E.—First Report of the Geological Photographs Committee of the Yorkshire Naturalists' Union. *Naturalist*, pp. 69-74.
- 15 ——— [See William Smith].
- 16 ——— and E. M. COLE.—Excursion to Ingleborough. *Trans. Leeds Geol. Assoc.*, Part vi., pp. 103-106.
- 17 BELL, D.—Phenomena of the Glacial Epoch: II., The 'Great Submergence.' [Holderness, p. 113]. *Trans. Glasgow Geol. Soc.*, vol. ix., pt. 1, pp. 100-138.
- 18 BENNEY, A. C.—The Oolitic System. *Bradford Nat. Hist. Mic. Soc.* [not seen].
- 19 BEVAN, G. P.—Tourist's Guide to the East and North Ridings. Ed. 5. [See 1878].
- 20 BLAKE, J. F.—The Geology of the Country between Redcar and Bridlington. *Proc. Geol. Assoc.*, vol. xii., pp. 115-144.
- 21 ——— G. W. LAMPLUGH, and E. M. COLE.—Excursion to the East Coast of Yorkshire. [Flamborough Head to Whitby]. *Proc. Geol. Assoc.*, vol. xii., pp. 207-222.
- 22 BOTHAMLEY, C. H.—The Sulphur Waters of Yorkshire. *Rep. Brit. Assoc.* for 1890, p. 779.
- 23 BREARE, W. H.—First Edition of Thorpe's New Illustrated Guide to Harrogate and District. To which is added Walks and Footpaths around Harrogate, and the Geology



- of Harrogate by W. GRAINGE. 8vo. *Harrogate*. Other editions, 1899 and 1908.
- 24 BROWNRIDGE, C.—The Yorkshire Naturalists' Union at Hayburn Wyke. *Naturalist* [Geology, pp. 291-293]. *Trans. Leeds Geol. Assoc.*, pt. 7, pp. 55-58. 1892.
- 25 B[ROWNRIDGE], C.—Excursion to Malham and Gordale. *Trans. Leeds Geol. Assoc.*, pp. 100-102.
- 26 ——— Excursion to the Winterburn Valley. *Trans. Leeds Geol. Assoc.*, pp. 111-113.
- 27 BUCKMAN, S. S.—A Monograph of the Inferior Oolite Ammonites of the British Islands. Part 5, pp. 225-256 ; Plates xxxvii.-xliv. [*Hudlestonia sinon*, p. 227 and *Dumortieria costula*, p. 237 from Blea Wyke]. *Monogr. Pal. Soc.*, vol. xlv.
- 28 BULMAN, G. W.—On the Sands and Gravels intercalated in the Boulder Clay. *Geol. Mag.*, dec. iii., vol. viii., pp. 337-348, 402-410.
- 29 CARTER, W. LOWER.—The Yorkshire Naturalists' Union at Leckby Carr. *Naturalist*, Aug., p. 239, and *Trans. Leeds Geol. Assoc.*, pp. 109-111.
- 30 [CARTER, W. LOWER].—Excursion to Bretton Park. *Trans. Leeds Geol. Assoc.*, pp. 79-80 ; Ingleton, pp. 80-85 ; Kildale in Cleveland, pp. 85-87 ; Almes Cliff Crag, pp. 87-89 ; Farnley, pp. 89-93 ; Upper Swaledale, pp. 94-96 ; Calverley pp. 96-100 ; Scarborough, pp. 106-7. [Some include remarks by W. Cheetham].
- 31 CHADWICK, S.—[See 1890].
- 32 CHEETHAM, W.—A Geological Tour through Durham into Cumberland [by Knaresborough, Boroughbridge, Piercebridge, High Force, Reeth, Grassington and Ilkley]. *Trans. Leeds Geol. Assoc.*, Part 6, 1890-91, pp. 12-18 ; *Research*, vol. ii., pp. 238-239.
- 33 ——— [See W. Lower Carter, and B. Holgate].
- 34 COLE, E. M.—The Yorkshire Naturalists' Union on the Wolds. [Wetwang, York Dale and Sledmere]. *Naturalist*, pp. 305-306 ; *Trans. Leeds Geol. Assoc.*, pt. 7, pp. 58, 59, 1892.
- 35 ——— Peat Deposit at Filey. *Naturalist*, Jan., pp. 17-19. [See 1890].

- 36 COLE, E. M.—Excursion to Lowthorpe. *Trans. Leeds Geol. Assoc.*, pp. 77-79.
- 37 ——— [See J. E. Bedford].
- 38 ——— [See J. F. Blake].
- 39 ——— [See G. W. Lamplugh].
- 40 ——— [See B. Holgate].
- 41 CROSSKEY, H. W.—Eighteenth Report . . on Erratic Blocks . . . . [East Yorkshire, pp. 345-352]. *Rep. Brit. Assoc.* for 1890, pp. 340-352.
- 42 DAKYNS, J. R.—On the Changes of the Lower Carboniferous Rocks in Yorkshire from South to North. *Rep. Brit. Assoc.* for 1890, pp. 811-2.
- 43 ——— and others.—The Geology of the Country around Mallerstang. Explanation of Quarter-Sheet, 97 N.W. (N.S. 40). Pp. x. + 213. *Geological Survey Memoir*. 8vo. London.
- 44 DAVIS, J. W.—On Fossil Fish in the West Riding Coalfield. *Rep. Brit. Assoc.* for 1890, pp. 822-3.
- 45 ——— [See B. Holgate].
- 46 DAVISON, C.—On the British Earthquakes of 1890, with the exception of those felt in the neighbourhood of Inverness. [N.E. of Leeds]. *Geol. Mag.*, dec. iii., vol. viii., pp. 450-455.
- 47 DE RANCE, C. E.—Notes on borings for water and salt in the County of York. [Well sections in Central and East Yorkshire]. *Proc. Yorks. Geol. Soc.* for 1889, vol. xi., pt. 3, pp. 424-440.
- 48 ——— Sixteenth Report . . . on the Circulation of Underground Waters. [Snaith and Middlesbrough, pp. 367, 368]. *Rep. Brit. Assoc.* for 1890, pp. 352-375.
- 49 DODDS, GEORGE.—[See William Smith].
- 50 EASTERFIELD, T. H.—The Yorkshire Naturalists' Union in Edlington and Wadsworth Woods. [Geology near Conisborough, pp. 335, 336]. *Naturalist*, pp. 331-336; *Trans. Leeds Geol. Assoc.*, pt. 7, pp. 60, 61.
- 51 ELIOT, W.—The North Sea-Wall and Royal Albert Drive, Scarborough. [Protection of the Cliff]. *Proc. Inst. Civ. Eng.*, vol. cv., pp. 289-294.
- 52 FOORD, A. H.—Catalogue of the Fossil Cephalopoda in the

- British Museum (Natural History), Part 2, pp. xxviii. + 407. 8vo. *London*.
- 53 FOX-STRANGWAYS, C.—Explanation of Horizontal Sections, Sheets 136, 138, 139. *Geological Survey*. 8vo. *London*.
- 54 ——— and G. BARROW.—Explanation of Horizontal Sections, Sheets, 130, 132, 135, 137. *Geological Survey*. 8vo. *London*.
- 55 ——— and G. W. LAMPLUGH—La Géologie de l'Est du Yorkshire. *Congrès Géol. Internat., Compte Rendu de la 4me Session, Londres*, pp. 371-415 (map).
- 56 ——— C. REID and G. BARROW.—Explanation of Horizontal Sections. Sheets 131, 134. *Geological Survey*. 8vo. *London*.
- 57 GOODCHILD, J. G.—The Yorkshire Naturalists' Union in Upper Swaledale. *Naturalist*, pp. 203-208. *Trans. Leeds Geol. Assoc.*, Part 6, pp. 94-96.
- 58 ——— [See H. H. Howell].
- 59 ——— [See B. Holgate].
- 60 GRAINGE, W.—[See W. H. Breare].
- 61 'GRAY, JOHNNIE'—[See H. Speight].
- 62 HARDCASTLE, C. D.—[See B. Holgate].
- 63 HARKER, A.—The Basement Conglomerate of the Carboniferous in Westmorland and Yorkshire. *Naturalist*, p. 38.
- 64 ——— Petrological Notes on some of the Larger Boulders on the Beach South of Flamborough Head. *Proc. Yorkshire Geol. Soc.*, vol. xi., pt. 3, pp. 409-423.
- 65 ——— Bibliography: Papers and Records published with respect to the Natural History and Physical Features of the North of England. *Geology and Palæontology*. 1890. *Naturalist*, Oct. and Nov., pp. 313-330.
- 66 ——— An Introduction to the Study of Petrology: the Igneous Rocks. *London*. 8vo. pp. 128.
- 67 ——— Cambrian and Silurian Rocks of Ewcross, Dufton and Shap [review of Balderson's]. *Naturalist*, Feb., pp. 63-4.
- 68 HATCH, F. H.—On Some West Yorkshire Mica-trap Dykes. *Rep. Brit. Assoc. for 1890*, pp. 813-4.
- 69 HAWKESWORTH, E.—From Kettleiness to Saltburn. [Geological sketch of that part of the Coast]. *Trans. Leeds Geol. Assoc.*, Part 6, pp. 55-59.

- 70 HEY, W. C.—Boulders at Guisborough. *Naturalist*, p. 182.
- 71 HOLGATE, B.—The Yorkshire Naturalists' Union at Grassington. *Naturalist*, pp. 266-268; *Yorkshire Weekly Post*, June 27th; *Trans. Leeds Geol. Assoc.*, pt. 7, pp. 53-55.
- 72 ——— The Carboniferous Strata of Leeds and its immediate Suburbs. *Rep. Brit. Assoc.*, for 1890, pp. 795-6.
- 73 ——— Some Physical Properties of the Coals of the Leeds District. *Rep. Brit. Assoc.* for 1890. pp. 796-7.
- 74 ——— Excursion to Castleford, pp. 73-75; Laister Dyke, B. HOLGATE, T. TATE, pp. 75-77; Lowthorpe, E. M. COLE, pp. 77-79; Bretton Park, J. SPENCER, J. W. DAVIS, pp. 79-80; Ingleton, C. D. HARDCASTLE, pp. 80-85; Kildale-in-Cleveland, J. HAWELL and W. Y. VEITCH, pp. 85-87; Almes Cliff, W. CHEETHAM, pp. 87-89; Farnley, pp. 89-94; Upper Swaledale, J. G. GOODCHILD, pp. 94-96; Calverley, W. CHEETHAM, pp. 96-100; Malham and Gordale Scar, R. H. TIDDEMAN and J. W. DAVIS, pp. 100-102; Scarborough, W. PHILLIPS, pp. 100-107; Leeds Museum, L. C. MIALI, pp. 108, 109; Lecky Carr [near Brafferton], T. C. MITCHELL, pp. 109-111; Winterburn Valley, R. H. TIDDEMAN, pp. 111-113. *Trans. Leeds Geol. Assoc.*, Part 6, 1890-1891.
- 75 ——— Excursion to Castleford. *Trans. Leeds Geol. Assoc.*, pp. 73-5; to Laisterdyke, *loc. cit.*, pp. 75-7.
- 76 HOLMES, THOMAS VINCENT, and C. DAVIES SHERBORN.—A Record of Excursions made between 1860 and 1890 [by the Geologists' Association; East and West Yorkshire by W. H. HUDLESTON]. *London*. Pp. 571, maps and sections.
- 77 HOWELL, H. H., C. FOX-STRANGWAYS, and G. BARROW.—Explanation of Horizontal Section, Sheet 133. *Geological Survey*. Pp. 10. 8vo. *London*.
- 78 HOWELL, J.—[See B. Holgate].
- 79 HUDLESTON, W. H.—[See Thomas Vincent Holmes].
- 80 JEFFS, O. W.—Report of the Committee . . . for the Collection . . . of Photographs of geological interest . . . *Rep. Brit. Assoc.* for 1890, pp. 429-444.
- 81 JONES, E.—Discovery of the Remains of Neolithic Man in the Elbolton Cave. *Midl. Nat.*, vol. xiii., pp. 222, 223.

- 82 JONES, E.—Report of the Committee . . . to complete the investigation of the Cave at Elbolton, near Skipton. *Geol. Mag.*, dec. iii., vol. viii., pp. 525-528; *Rep. Brit. Assoc.* for 1891, pp. 351-353 (1892).; *Nature*, Sept. 17th, vol. xlv., p. 480.
- 83 — The Exploration of Elbolton Cave. *Rep. Brit. Assoc.* for 1890, pp. 817-8.
- 84 KIDSTON, R.—Notes on the Palæozoic Species mentioned in Lindley and Hutton's 'Fossil Flora.' [Some from Yorkshire Coalfield]. *Proc. Roy. Phys. Soc., Edinburgh*, vol. x., pt. 2, 1889-90, pp. 345-391.
- 85 — On the Formation and Internal Structure of Carboniferous Ferns in their relation to existing genera, with special reference to British Palæozoic Species. *Trans. Glasgow Geol. Soc.*, vol. ix., pt. 1, pp. 1-56.
- 86 LAMPLUGH, G. W.—Final Report of the Committee . . . for investigating an Ancient Sea-beach near Bridlington Quay. *Rep. Brit. Assoc.* for 1890, pp. 375-377.
- 87 — On the Speeton Clays and their Equivalents in Lincolnshire. *Ibid.*, pp. 808, 809.
- 88 — On the Larger Boulders of Flamborough Head and other parts of the Yorkshire Coast. *Proc. Yorks. Geol. Soc.*, vol. xi., pt. 3, pp. 397-408.
- 89 — On the Drifts of Flamborough Head. *Quart. Journ. Geol. Soc.*, vol. xlvii., pp. 384-429; Discussion, pp. 429-431.
- 90 — On the Boulders and Glaciated Rock Surfaces of the Yorkshire Coast. *Rep. Brit. Assoc.* for 1890, pp. 797-8.
- 91 — East Yorkshire during the Glacial Period. *Rep. Brit. Assoc.* for 1890, pp. 798-9.
- 92 — [See J. F. Blake].
- 93 — [See C. Fox-Strangways].
- 94 — and COLE, E. M.—Excursion to the East Coast of Yorkshire. *Proc. Geol. Assoc.*, vol. xii., pt. 5, Nov., pp. 207-222.
- 95 MARR, J. E.—The Backbone of England. [History of the elevation of the Pennine Chain]. (Abstract). *Trans Leeds Geol. Assoc.*, pt. 6, pp. 51-53.
- 96 — and R. H. TIDDEMAN—La Géologie de l'Ouest du

- Yorkshire. *Congrès Géol. Internat. Compte Rendu* 4me Session. *Londres*. (Map).
- 97 MIALL, L. C.—[See B. Holgate].
- 98 MILLER, —.—On the Coalfield adjoining Barnsley. *Proc. Midl. Inst. Eng.*, vol. xii., p. 153. *Coll. Guard.*, vol. lxi., p. 747.
- 99 MITCHELL, T. C.—[See B. Holgate].
- 100 NEWTON, R. BULLEN.—On the genus *Levellia* (*Porcellia* Léveillé), with a notice of a new species from the Carboniferous Limestone of Ireland. [*L. puzo*, etc., from Bolland]. *Geol. Mag.*, dec. iii., vol. viii., pp. 202-208.
- 101 PEARCE, HORACE.—Personal Observations of Glacial Action among British Mountains. *Midland Nat.*, April, vol. xiv., pp. 77-83.
- 102 PHILLIPS, J. A.—Elements of Metallurgy. Ed. 3. [See 1874].
- 103 PHILLIPS, W.—[See B. Holgate].
- 104 PLATNAUER, H. M.—List of Figured Specimens in York Museum. *Ann. Rep. Yorks. Phil. Soc.* for 1890, pp. 56-89.
- 105 READE, T. MELLARD.—The Perched Blocks of Norber Brow and their levels relative to their Place of Origin. *Geol. Mag.*, July, pp. 291-2.
- 106 REID, C.—[See G. Barrow].
- 107 RICKETTS, C.—Some Phenomena which occurred during the Glacial Epoch. [General account of the Boulder Clay of the North of England]. Presidential Address. *Proc. Liverpool Geol. Soc.*, vol. vi., pp. 225-247.
- 108 ROBERTS, R. W. B.—The Cliff Sections of the Yorkshire Coast. [Flamborough to Whitby]. *Trans. Liverpool Geol. Assoc.*, vol. xi., pp. 59-68.
- 109 RÜCKER, A. W., and T. E. THORPE.—A Magnetic Survey of the British Isles for the Epoch of Jan. 1, 1886. *Phil. Trans.*, vol. clxxxi., B., pp. 53-328, plates i.-xiv.
- 110 SHERBORN, C. DAVIES.—[See Thomas Vincent Holmes].
- 111 SHUFFREY, W. A.—The Flowering Plants and Ferns of Littondale. [With brief geological description]. *Nat.*, pp. 51-61.
- 112 SMITH, WILLIAM.—Old Yorkshire. [Includes chapters on The Rudstone Monolith (pp. 61-68) by GEORGE DODDS,

- and Yorkshire Geology and Geologists (Samuel Arthur Adamson, F.G.S.), pp. 207-210, by J. E. BEDFORD]. Pp. xvi.+304.
- 113 SPEIGHT, H. [Johnnie Gray].—Through Airedale from Goole to Malham. [Geology, pp. v.-xii.]. Pp. lxiv.+302. 8vo. *Leeds*.
- 114 SPENCER, J.—[See B. Holgate].
- 115 STEARS, J.—Coal and its Formation. [Section of the Barnsley Coalfield]. Pp. 16. 8vo. *Hull*.
- 116 STIRRUP, M.—Note on a Boulder from the Coal of Aldwarke Main Colliery, near Rotherham, Yorkshire. *Trans. Manchester Geol. Soc.*, vol. xxi., pt. 6, 1890-91, pp. 170-172.
- 117 TATE, T.—A Geological Episode, as recorded in the Ingleton granite. (Abstract). *Trans. Leeds Geol. Assoc.*, pt. 6, pp. 54-55.
- 118 ——— On the So-Called Ingleton Granite. *Rep. Brit. Assoc.*, for 1890, pp. 800-1.
- 119 ——— Note on Phillips's Dyke, Ingleton. *Rep. Brit. Assoc.* 1890. P. 814.
- 120 ——— [See B. Holgate].
- 121 THOMPSON, S. P.—On the Sources of the River Aire. *Rep. Brit. Assoc.* for 1890, pp. 821-822.
- 122 THORPE, T. E.—[See A. W. Rücker].
- 123 TIDDEMAN, R. H.—Physical History of the Carboniferous Rocks in Upper Airedale. *Proc. Yorks. Geol. Soc.*, pp. 482-492.
- 124 TIDDEMAN, R. H.—[See J. E. Marr].
- 125 ——— [See B. Holgate].
- 126 VEITCH, W. Y.—Sections of borings for Salt near Middlesbrough. [Details given]. *Proc. Cleveland Nat. Field Club*, vol. i., No. 3, pp. 83-86.
- 127 ——— [See B. Holgate].
- 128 VINE, G. R.—Notes on the Polyzoa and Microzoa of the Red Chalk of Yorkshire and Norfolk. *Proc. Yorks. Geol. Soc.*, vol. xi., pt. 3, pp. 363-396.
- 129 WOODS, H.—Catalogue of the Type Fossils in the Woodwardian Museum, Cambridge. Pp. xvi., +180. 8vo. *Cambridge*.
- 130 WOODWARD, A. SMITH.—*Pholidophorus germanicus*: an

Addition to the Fish Fauna of the Upper Lias of Whitby.  
*Geol. Mag.*, dec. iii., vol. viii., pp. 545, 546.

131 — [See also 1889].

132 WRIGHT, G. P.—Notes on some of the Oolitic and Cretaceous Rocks of North-East Yorkshire. *Proc. Amateur Sci. Soc.*, vol. i., p. 58.

### 1892.

1 ANON, [M. E.].—The Yorkshire Coalfield. [Messrs. Charlesworth Collieries, p. 15 ; Monk Bretton, p. 59 ; Barrow, p. 105 ; St. John's and Kippax, p. 190 ; Denaby Main, p. 235 ; Aldwarke Main, etc., p. 283 ; Oaks, p. 236 ; Manvers Main, p. 372 ; Rylands Main, p. 419 ; Wharnccliffe Silkstone, p. 463 ; South Kirkby, p. 509 ; Dodwith p. 555 ; Prince of Wales', Pontefract, p. 603 ; Featherstone Main, p. 700 ; Rotherham Main, p. 835 ; Mirfield, p. 884 ; Nevin's Section, p. 1023]. *Coll. Guard.*, vol. lxiii.

2 — Craven Naturalists' Annual Conversazione [Elbolton Cave]. *Craven Herald*, Jan. 29th.

3 — Reports of the Inspectors of Mines. *Parliamentary Report*. Fol. London.

4 — Our Photograph. A Fine Carboniferous Tree [*Sigillaria*, found in the Ganister Quarry of Messrs. B. Rowley & Co. in the Meanwood Valley]. *Trans. Leeds Geol. Assoc.* Part 7, pp. 51, 52.

5 — Excursion to Elbolton Cave. *Trans. Leeds Nat. and Sci. Soc.* for 1890, p. 49.

6 ANDREWS, W.—Bygone Yorkshire. [Lake Dwellings of Yorkshire, by J. TINDALL WILDRIDGE, pp. 1-38. An Ancient Monolith (Rudstone) by W. H. THOMPSON, pp. 39-45]. Pp. 267. 8vo. *Hull and York*.

7 ATKINSON, J. C.—Forty years in a Moorland Parish, Reminiscences and Researches in Danby. Pp. xi.+457.

8 BAKER, J. G.—[See 1888].

9 BEDFORD, J. E.—Evidences of Glacial Action in the Leeds District. [Chiefly between Leeds and Bolton]. *Trans. Leeds Geol. Assoc.*, Part 7, pp. 29-34.



- 10 BEDFORD, J. E.—Evidences of Glacial Action near Leeds. [Meanwood Valley]. *Proc. Yorks. Geol. Soc.*, vol. xii., pt. 1, pp. 69-71.
- 11 BRADSHAW, B.—Dictionary of Mineral Waters. [See 1882].
- 12 BROWNE, A. J. JUKES.—[See A. J. Jukes-Browne].
- 13 B[ROWNRIDGE], C.—At Brimham Rocks. [Account of the visit of the Leeds Geological Association]. *Yorks. Weekly Post*, August 27th.
- 14 ——— Excursion to Horton-in-Ribblesdale. *Naturalist*, pp. 183-185; *Trans. Leeds Geol. Assoc.*, Part 7, pp. 67-70.
- 15 ——— Excursion to Hayburn Wyke. *Trans. Leeds Geol. Assoc.*, pt. 7, pp. 558.
- 16 BULMAN, G. W.—Drift Coal in Sandstone. *Geol. Mag.*, dec. iii., vol. ix., pp. 151-154.
- 17 CAMERON, A. C. G.—On the Continuity of the Kellaways Beds over extended Areas near Bedford . . [Drewton]. *Geol. Mag.*, dec. iii., vol. ix., pp. 66-71.
- 18 CHADWICK, S.—The Yorkshire Boulder Committee and its Fourth Year's Work. [Erratics from near Thirsk]. *Naturalist*, pp. 155-158.
- 19 CHEETHAM, W.—[See R. H. Tiddeman].
- 20 CLOUGH, S.—[See R. H. Tiddeman].
- 21 COLE, E. M.—The Erosion of the Yorkshire Coast. *Nat.*, pp. 103-107.
- 22 ——— Excursion to York Dale and Sledmere. *Trans. Leeds Geol. Assoc.*, pp. 58-59.
- 23 ——— [See R. H. Tiddeman].
- 24 CROSSKEY, H. W.—Nineteenth Report . . . Erratic Blocks . . . . [East Yorkshire, pp. 295-297]. *Rep. Brit. Assoc.* for 1891, pp. 276-299.
- 25 DAKYNS, J. R.—The Geology of the Country between Grassington and Wensleydale. *Proc. Yorks. Geol. Soc.*, vol. xii., pt. 2, pp. 133-144.
- 26 DAVIS, J. W.—English Lake Dwellings [at Ulrome, discovered in 1880]. *Natural Science*, vol. i., pp. 40-43.
- 27 ——— On the Fossil Fish-Remains of the Coal Measures of the British Islands. Part I. Pleuracanthidæ. [Several

- Yorkshire species]. *Sci. Trans. Roy. Dublin Soc.*, Ser. 2. vol. iv., pp. 703-748.
- 28 — On some Sections in the Liassic and Oolitic Rocks of Yorkshire. *Proc. Yorks. Geol. Soc.*, vol. xii., pt. 2, pp. 170-214.
- 29 DEMAÏN, M.—The Flora of the Banks [near Clitheroe; Carboniferous Limestone Fossils figured]. *Sci. Goss.*, vol. xxviii., pp. 152-153.
- 30 DE RANCE, C. E.—Seventeenth Report . . . on Underground Waters . . . [Skipton, p. 30]. *Rep. Brit. Assoc. for 1891*, pp. 300-312.
- 31 — On the Underground Waters of Lincolnshire. [Borings in the neighbourhood of Goole, pp. 43-48]. *Proc. Yorks. Geol. Soc.*, vol. xii., pt. 1, pp. 22-51.
- 32 DONALD, JANE.—Notes on some new and little-known Species of Carboniferous Murchisonia. [From Settle, Askrigg, etc.]. *Quart. Journ. Geol. Soc.*, vol. xlviii., pp. 562-574.
- 33 EASTERFIELD, T. H.—[See R. H. Tiddeman].
- 34 FIELD, J.—The Yorkshire Naturalists' Union at Penistone and Dunford Bridge. [Geology, pp. 258, 259]. *Nat.*, pp. 254-259.
- 35 FOX-STRANGWAYS, C.—The Jurassic Rocks of Britain: Yorkshire. *Geological Survey Memoir*, pp. ix., 550 and 250. 2 vols. 8vo. London.
- 36 FRANKLAND, P. F.—What is the Importance of Magnesia in Drinking Water. [Analysis of Water from Pontefract, etc.]. *Trans. Seventh Internat. Congress of Hygiene and Demography*, vol. v., pp. 82-88.
- 37 GOODCHILD, J. G.—Notes on the Glacial Phenomena of Upper Ribblesdale. *Naturalist*, pp. 241-246.
- 38 — Notes on the Conistone Limestone Series. [Cross Fell and Craven]. *Geol. Mag.*, dec. iii., vol. ix., pp. 295-299. [See also *loc. cit.* pp. 526, 527].
- 39 — [See R. H. Tiddeman].
- 40 'GRAY, JOHNNIE'—[See H. Speight].
- 41 GREGORY, J. W.—[See G. F. Wright].
- 42 HARDCASTLE, C. D.—[See R. H. Tiddeman].
- 43 HARKER, A.—Forest-bed at Hull. *Naturalist*, p. 22.

- 44 HARKER, A.—Some North Country Quartzites. [Teesdale]. *Naturalist*, pp. 73-75.
- 45 ——— The Lamprophyres of the North of England. [Cronkley in Teesdale]. *Geol. Mag.*, dec. iii., vol. ix., pp. 199-206.
- 46 ——— On Porphyritic Quartz in Basic Igneous Rocks. [Teesdale]. *Ibid.*, pp. 485-488.
- 47 ——— The Yorkshire Naturalists' Union at Withernsea. [Geology], *Naturalist*, pp. 298, 299. *Yorkshire Post and Leeds Mercury*, Aug. 2nd, 1892.
- 48 HARKER, ALFRED.—Bibliography . . . . Geology and Palæontology, 1891. *Naturalist*, July-Aug., pp. 219-234.
- 49 HENSLOW, G.—Phosphate Nodules. [Black Rock, Speeton] p. 238. *Medit. Nat.*, vol. ii., No. 16, Sept., pp. 235-239; Originally appeared in the *Leisure Hour*, 1863, vol. xii., pp. 436-438.
- 50 HICK, T.—On a New Fossil Plant from the Lower Coal-Measures. [South Yorkshire]. *Journ. Linn. Soc.*, vol. xxix., pp. 86-102.
- 51 ——— On the present state of our Knowledge of the Yorkshire Calamitæ. *Proc. Yorks. Geol. and P. Soc.*, vol. xii., pt. 1, pp. 1-8.
- 52 HOLDSWORTH, B. J.—Holiday Finds [at Whitby]. *Nat. Hist. Journ.*, Oct. 15th, p. 108.
- 53 HOLGATE, B.—Report of a visit to North Yorkshire of the Boulder Committee of the Yorkshire Naturalists' Union, Sept. 12th, 1891. Glacial deposits in Teesdale. *Trans. Leeds Geol. Assoc.*, pt. 7, pp. 23-25.
- 54 ——— The Mode of Deposition and Properties of the Carboniferous Strata of Leeds and its immediate suburbs. *Proc. Yorks. Geol. Soc.*, vol. xii., pt. 1, pp. 9-21.
- 55 ——— Excursion of Grassington. *Trans. Leeds Geol. Soc.*, pp. 53-55.
- 56 ——— The Yorkshire Naturalists at Rokeby [near Barnard Castle; Geology]. *Naturalist*, pp. 214, 215.
- 57 ——— [The Glacial Deposits of Teesdale]. *Trans. Leeds Geol. Assoc.*, pt. 7, 1891-92, pp. 23-25.
- 58 HOOD, J. DENNIS.—Waterspouts on the Yorkshire Wolds. Cataclysm at Langtoft and Driffield. *Driffield*. Pp. 66.

- 59 HOWORTH, H. H.—Did the Mammoth Live Before, During, or After the Deposition of the Drift. [Hessle gravels, Kirkdale and Victoria Caves]. *Geol. Mag.*, dec. iii., vol. ix., pp. 250-258.
- 60 ——— The Glacial Nightmare and the Flood: A second appeal to common sense, from the extravagance of some recent geology. Vol. 1, pp. xxviii.+376 (vol. 2, in 1893).
- 61 ——— [See 1893].
- 62 HUDLESTON, W. H.—A Monograph of the British Jurassic Gasteropoda. Pt. 1. Nos. 5 and 6. Gasteropoda of the Inferior Oolite. [No. 5, Many Yorkshire Species; No. 6, pp. 280, 283, 289]. Pp. 225-272, 273-324; plates xvii.-xx., xxi.-xxvi. *Monogr. Pal. Soc.*, vols. xlv. and xlv.
- 63 ——— and E. WILSON.—A Catalogue of British Jurassic Gasteropoda. [Many Yorkshire specimens enumerated]. Pp. xxxiii., 147. 8vo. *London*.
- 64 HUTCHINSON, H. N.—Extinct Monsters. A popular account of some of the larger forms of ancient animal life. Pp. xx., 254. 8vo. *London*.
- 65 JEFFS, O. W.—The Commercial Aspects of Geology. [Coal, Jet, Alum, etc.]. Reprinted from *The Counting House*. 8vo. *London*.
- 66 ——— Second Report of the Committee . . . for the Collection . . . of Photographs of Geological Interest [includes Yorkshire photographs]. *Rep. Brit. Assoc.* for 1891, pp. 321-333.
- 67 JONES, E.—Exploration of the Elbolton Cave. *Proc. Yorks. Geol. Soc.*, vol. xii., pt. 1, pp. 105-107. [See also 1891].
- 68 ——— Relics found in Yorkshire Caves. *Trans. Leeds Nat. and Sci. Soc.*, for 1890, pp. 46-47.
- 69 ——— Report of the Committee . . . to complete the investigation of the Cave at Elbolton, near Skipton, in order to ascertain whether Remains of Palæolithic Man occur in the Lower Cave Earth. *Rep. Brit. Assoc.* for 1891, pp. 351-353.
- 70 JONES, T. R., and J. W. KIRKBY.—Notes on the Palæozoic Bivalved Entomostraca. No. XXX. On Carboniferous

- Ostracoda from Mongolia. [Many North of England Species]. *Ann. Mag. Nat. Hist.*, ser. 6, vol. ix., pp. 302-307.
- 71 JUKES-BROWNE, A. J.—The Students' Handbook of Physical Geology.
- 72 KENDALL, P. F.—The Supposed Glacial Submergence. [Evidence against submergence in Glacial times]. *Trans. Leeds Geol. Assoc.*, pt. 7, 1891-2, pp. 43-47.
- 73 ——— Note on the Mode of Preservation of the Bones [of Fallow-Deer from Goole Moor]. *Naturalist*, pp. 169, 170.
- 74 ——— Ancient Glaciers in the British Islands; describing the glacial phenomena of these islands, and especially of the North of England, as bearing out the land-ice theory. Pp. 137-181 of G. F. Wright's book. [See below].
- 75 KENNY, A. H.—Erosion of Coast of Yorkshire. Distances in September, 1889, from objects inland to the Coast. *Naturalist*, p. 105.
- 76 KIDSTON, R.—On the Occurrence of the Genus *Equisetum* (*E. hemingwayi*, Kidston) in the Yorkshire Coal-Measures [Barnsley]. *Ann. Mag. Nat. Hist.*, ser. 6, vol. ix., pp. 138-141.
- 77 ——— On the Fructification of *Sphenophyllum tricomatosum* Stur, from the Yorkshire Coalfield [Barnsley]. *Proc. Roy. Phys. Soc., Edinburgh*, vol. xi., pt. 1, pp. 56-62.
- 78 KIRKBY, J. W.—[See T. R. Jones].
- 79 LAMPLUGH, G. W.—The Flamborough Drainage Sections. *Proc. Yorks. Geol. Soc.*, vol. xii., pt. 2, pp. 145-148.
- 80 ——— [See A. Pavlow].
- 81 LAVIS, H. J. JOHNSTON.—The Prescriber's Guide to the Harrogate Mineral Waters. [Tables of Analyses]. 8vo. London.
- 82 LE TALL, B. B.—[Large Millstone Grit Glacial Boulder at York]. *Nat. Hist. Journ.*, June, 15th, p. 76.
- 83 LEYLAND, J.—The Yorkshire Coast and the Cleveland Hills and Dales, with illustrations by Alfred Dawson and Lancelot Speed. [Notes on the geology of East Yorkshire]. Pp. 3-7, 66 n., 88, 141, 147, 182, 185, 190, 197, 244, 265-267, 322. Pp. vii.+334. 8vo. London.

- 84 LOVEL, J.—The Cloud-burst at Round Hill, Langtoft. *Nat. Hist. Journ.*, Oct. pp. 104-107. [See also *Nature*, July 4th, vol. xlv., p. 246, and Hull and Leeds newspapers of July 5th and 6th].
- 85 MARLEY, J.—On the Cleveland and South Durham Salt Industry. *Trans. N. Eng. Inst. Min. Eng.*, vol. xxxix., pt. 3, pp. 91-125.
- 86 MARR, J. E.—Lecture to the Craven Naturalists [on the conditions of northern England during the Glacial Period]. *Craven Herald*, Jan. 22nd.
- 87 ——— The Coniston Limestone Series. *Geol. Mag.*, dec. iii., vol. ix., pp. 97-110, and *loc. cit.* pp. 443-447.
- 88 ——— On the Wenlock and Ludlow Strata of the Lake District. [Sedbergh and Settle]. *Ibid.*, pp. 534-541.
- 89 M[ETCALF], W. D.—Excursion to Oulton. *Trans. Leeds Geol. Assoc.*, pp. 63-65.  
—— [See R. H. Tiddeman].
- 90 MILLER, R.—The Barnsley Coalfield. *Trans. Fed. Inst. Mining Eng.*, vol. ii., pp. 7-10.
- 91 NATHORST, A. G.—Fresh Evidence concerning the Distribution of Arctic Plants during the Glacial Epoch. *Nature*, June 21st, vol. xlv., p. 275.
- 92 PAVLOW, A., and G. W. LAMPLUGH.—Argiles de Speeton et leurs equivalents. *Bull. Soc. Imp. Nat. Moscow*, for 1891, pp. 181-213, 455-570. Abstract. *Geol. Mag.*, dec. iii., vol. ix., pp. 422-426; *Nature*, vol. xlv., p. 257.
- 93 PLATNAUER, H. M.—Notes on Two Borings. [Strensall and Haxby]. *Ann. Rep. Yorks. Phil. Soc.* for 1891, pp. 77-79.
- 94 REED, F. R. COWPER.—Woodwardian Museum Notes. [*Platycrinus pileatus* Goldf., from the Carboniferous Limestone of Bolland]. *Geol. Mag.*, dec. iii., vol. ix., pp. 548, 549.
- 95 RICKETTS, C.—Report of Field Meeting at Settle, May 1891. [Horton-in-Ribblesdale and Norber]. *Proc. Liverpool Geol. Soc.*, vol. vi., pp. 453-455.
- 96 ROBERTS, R. W. B.—The Jurassic Rocks of the neighbourhood of Cambridge . . . [compared with those of the northern counties]. Pp. vii.+96. 8vo. *Cambridge*.

- 97 ROBERTS, THOMAS.—The Jurassic Rocks of the Neighbourhood of Cambridge [compared with Yorks.]. *Cambridge*, pp. vii. + 96.
- 98 RUSSELL, A. G.—Harrogate an inland Health Resort. [History; Meteorology, Waters, etc.]. 2 illustrations. *Journ. Brit. For. Health Resorts*, n. s., vol. iii., No. 2, pp. 51-56.
- 99 SPEIGHT, H. (Johnnie Gray).—The Craven and North-West Yorkshire Highlands, being a complete account of the History, Scenery, and Antiquities of that romantic district. [Geology, pp. 180, 181, 216, 229, 232, 235, 342, 391, 395, 422]. Pp. 470. 8vo. *London*.
- 100 SPENCER, J.—The Affinity of Dodoxylon to Cordaites. *Proc. Yorks. Geol. Soc.*, vol. xii., pt. 1, pp. 95-104.
- 101 STATHER, J. W.—The Yorkshire Naturalists' Union, at Coxwold and Byland. *Naturalist*, Dec., pp. 353-4.
- 102 STEAVENSON, A. L.—On the Subterranean Water Sheds of Cleveland. *Proc. Cleveland Inst. Engineers*, pp. 183-203.
- 103 STOCK, W. F. K.—[See R. H. Tiddeman].
- 104 TATE, T.—Notes on Recent Borings for Salt and Coal in the Tees District [near Middlesbrough]. *Quart. Journ. Geol. Soc.*, vol. xlviii., pp. 488-495.
- 105 ——— The Yorkshire Boulder Committee and its Fifth Year's Work. [East and North Riding]. *Naturalist*, pp. 159-165.
- 106 THOMPSON, W. H.—[See W. Andrews].
- 107 TIDDEMAN, R. H.—Presidential Address to the Craven Naturalists. [Conditions of Craven in Carboniferous times, coral reefs, etc.]. *Craven Herald*, Jan. 29th.
- 108 ——— Reports of Excursion to Grassington, pp. 53-55; Hayburn Wyke, C. D. HARDCASTLE, pp. 55-58; York Dale and Sledmere, E. M. COLE, pp. 58-59; Hardcastle Crag [Hebden Bridge], 59, 60; Conisborough, T. H. EASTERFIELD, pp. 60, 61; Micklefield, S. CLOUGH, pp. 62, 63; Oulton [Leeds], W. D. METCALF, pp. 63-65; Yeadon and Guisley Railway Cutting, W. CHEETHAM, pp. 65-67; Horton-in-Ribblesdale, J. G. GOODCHILD, pp. 67-70; Rokeby and the Greta [Barnard Castle], W. F. K. STOCK, pp. 70-72. *Trans. Leeds Geol. Assoc.*, Part 7, 1891-92.

- 109 TOMLINSON, C.—Aerolites: Bolides [one in Yorkshire, 56 lbs., 1796]. *Notes and Queries*, Oct. 22nd, p. 321.
- 110 TUTE, J. S.—A Permian Conglomerate Bed at Markington. [Contains pebbles of Carboniferous Limestone and Sandstone]. *Proc. Yorks. Geol. Soc.* for 1891, vol. xii., pt. 1, pp. 72-73.
- 111 WAITE, E. R.—Remains of Fallow Deer from Goole Moor. *Naturalist*, pp. 167-169.
- 112 WALKER, J. F.—The Discovery of *Terebratulina substriata* Schlotheim, in Yorkshire. *Geol. Mag.*, dec. iii., vol. ix., p. 364.
- 113 ——— On Yorkshire Thecidea. *Ibid.*, Dec. p. 548.
- 114 WATTS, W.—Thermometrical Observations of Atmospheric Air and Water at Piethorn and Denshaw. [Effect of moisture, etc. on rocks and soils]. *Trans. Manchester Geol. Soc.*, vol. xxi., pt. 17, pp. 503-519.
- 115 WILDRIDGE, T. TINDALL.—[See W. Andrews].
- 116 WILLIAMSON, W. C.—On the Organisation of Fossil Plants of the Coal-Measures. Pt. 18. [Halifax]. *Phil. Trans.* vol. 182 B., pp. 255-265.
- 117 ——— [not signed].—Professor W. C. Williamson, LL.D., F.R.S., on his earlier Palæontological Work. *Trans. Manch. Geol. Soc.*, vol. 21, pt. 16, pp. 488-502.
- 118 ——— [Note on the mineralization of fossil remains]. *Quart. Journ. Geol. Soc.*; *Proc.*, pp. 184, 185; *Nature*, May 19th, vol. xlv., p. 70.
- 119 WILSON, E.—[See W. H. Hudleston].
- 120 WRIGHT, G. F.—Man and the Glacial Period. [Ancient Glaciers in Eastern Hemisphere, by P. F. KENDALL, pp. 137-181; Ed. 2, 1893]. Pp. xiv., 385. 8vo. London. Reviewed by J. W. GREGORY, *Glac. Mag.*, vol. i., pp. 263-266 (1894).
- 121 ——— Theory of an Interglacial Submergence in England. *Amer. Journ. Sci.*, ser. 3, vol. xliii., pp. 1-8.

1893.

- 1 ANON.—By the Banks of the Yorkshire Rivers. The Ribble. IX., From Langcliffe to Ribblehead. *Yorkshire Weekly Post*, Sept. 9th.



- 2 ANON.—[Large Boulder at York, and Blow-holes at Flamborough]. *Nat. Hist. Journ*, May 15, p. 62.
- 3 ——— Reports of the Inspectors of Mines. *Parliamentary Report*. Fol. London.
- 4 ——— Glacial Deposits on Rombald's Moor. *Yorkshire Weekly Post*, Sept. 9th.
- 5 ——— Minutes of Evidence taken before the Select Committee of the House of Commons on Private Bills. Newington Water. [Hull]. *Parliamentary Paper*. Fol. London.
- 6 BELL, WM. R.—Yorkshire Boulders [near Middleton in Teesdale]. *Naturalist*, Dec., pp. 364-5.
- 7 BLAKE, J. F.—Introductory Review. *Annals of British Geology*. Pp. xlv.
- 8 BOLTON, HERBERT.—Catalogue of Type Fossils [in the Manchester Museum]. *Manchester*, pp. iii.+35.
- 9 BONNEY, T. G.—The Story of Our Planet. [Yorkshire noted]. Pp. xvi.+592. 8vo. London, Paris, and Melbourne. Ed. 2, 1898. Ed. 3, 1902.
- 10 BOTHAMLEY, C. H.—The Mineral Waters of Askern in Yorkshire. *Journ. Chem. Soc.*, vol. lxiii., pp. 684-996.
- 11 BOYD, W.—Littondale: Past and Present. Pt. 1. Fifty Years in Arnecliffe. [Geology, pp. 16, 17]. Pp. 69. Sq. 8vo. Leeds.
- 12 BRADSHAW, B.—Dictionary of Mineral Waters. [See 1882].
- 13 B[ROWNRIDGE], C.—Excursion to Brimham Rocks. *Trans. Leeds Geol. Assoc.*, pt. 8, pp. 91, 92.
- 14 BURTON, JOHN.—[Boulders at] Horbury. *Naturalist*, Dec., pp. 367-8.
- 15 CARTER, W. L.—Excursion to Dunford Bridge, pp. 84, 85; Meanwood Valley, pp. 85-87; Draughton, pp. 89, 90. *Trans. Leeds Geol. Assoc.*, pt. 8, 1892-93.
- 16 ——— and J. W. STATHER—Yorkshire Naturalists at Kirkby Moorside. *Naturalist*, pp. 320-323.
- 17 CHAPMAN, F.—The Foraminifera of the Gault of Folkestone. IV. [Speeton, etc.]. *Journ. Roy. Mic. Soc.*, Oct., pp. 579-595.
- 18 C[HEETHAM], W.—Excursion to Reevah [near Yeadon]. Pp. 92, 93; *Trans. Leeds Geol. Assoc.*, pt. 8, 1892-93.

- 19 CLARK, J. EDMUND.—[Boulders at] Clifton, York. *Naturalist*, Dec., p. 366.
- 20 COLE, E. M.—Erosion of the Yorkshire Coast ; being the Report of the Coast Erosion Committee of the Yorkshire Naturalists' Union for 1892. *Naturalist*, pp. 142-144.
- 21 CROSSKEY, H. W.—Twentieth Report . . . on Erratic Blocks. [Yorkshire, pp. 267-269]. *Rep. Brit. Assoc.* for 1892, pp. 267-289.
- 22 CUTTRISS, S. W.—Excursion to Otley Chevin. *Trans. Leeds Geol. Assoc.*, pt. 8, pp. 95-96.
- 23 DAMES, W.—Über die Gliederung der Flötzformationen Helgolands. [Fossils similar to those of the Speeton Clay]. *Sitz k-preuss. Akad. Wissensch. Berlin*, pp. 1019-1039 ; *Geol. Mag.*, dec. iv., vol. i., pp. 84, 85.
- 24 DEELEY, R. M.—The Glacial Succession. *Geol. Mag.*, Jan., pp. 31-35.
- 25 DE RANCE, C. E.—On the Relation of Geology to Population and Agriculture of England and Wales. *Trans. Manchester Geol. Soc.*, vol. xxii., pt. 3, pp. 85-109, Discussion, pp. 110-112, 181-191.
- 26 FENNELL, CHARLES W.—[Boulders at] Wakefield. *Naturalist*, Dec., p. 368.
- 27 GEIKIE, A.—Text-Book of Geology ; 3rd edition, revised and enlarged. Pp. xvi.+1147. 8vo. *London*. [See 1882].
- 28 GOODCHILD, J. G. —[Excursion to Aysgarth]. *Naturalist*, pp. 230-232 ; *Trans. Leeds Geol. Assoc.*, pt. 8, pp. 96-99.
- 29 GRAY, J. W.—[See Kendall, P. F.].
- 30 GREGSON, W.—[Boulders at] Ripon, etc. *Naturalist*, Dec., pp. 365-6.
- 31 GRESLEY, W. S. [and others].—A Typical Section in the 'Main' Coal of the Moira Division of the Leicestershire Coalfield. *Trans. Manch. Geol. Soc.*, vol. 22, pt. 3, pp. 74-85. [See also vol. 21, pt. 18].
- 32 HARDCASTLE, C. D.—Chalk and Flint. [The Chalk of Yorkshire compared with other districts]. *Trans. Leeds Geol. Assoc.*, pt. 8, pp. 14-24.
- 33 HARKER, A.—Norwegian Boulders in Holderness. *Naturalist*, Jan., pp. 1-4.

- 34 HARKER, A.—Scandinavian Rocks in the English Boulder-Clays. [Holderness]. *Geol. Mag.*, dec. iii., vol. x., p. 140.
- 35 HARKER, ALFRED.—Bibliography . . . . . Geology and Palæontology. 1892. *Naturalist*, Sept., pp. 265-280.
- 36 H[AWKESWORTH], E.—Excursion to Withernsea. *Trans. Leeds Geol. Assoc.*, pt. 8, pp. 87-89.
- 37 HIND, W.—On the Affinities of *Anthracopectera* and *Anthracomya* [from the Yorkshire Coal-Measures]. *Quart. Journ. Geol. Soc.*, vol. xlix., pp. 249-275.
- 38 HINDE, G. J.—A Monograph of the British Fossil Sponges. Pt. 3. Sponges of Jurassic Strata. [Yorkshire, pp. 193, 212, 223, 224, 227, 228, 229, 237, 247]. Pp. 189-254; plates x.-xix. *Monogr. Pal. Soc.*, vol. xlvii.
- 39 HOLGATE, B.—Some examples of change in rock caused by the permeation of underground water. [Carboniferous Limestone, Yoredale Rocks, Chalk, etc.]. *Trans. Leeds Geol. Assoc.*, pt. 8, pp. 70-74.
- 40 HOWORTH, H. H.—The Glacial Nightmare and the Flood, a Second Appeal to Common Sense from the Extravagance of some Recent Geology. Vol. 2, pp. xii.+544. 8vo. London. (vol. 1, issued in 1892).
- 41 HUDLESTON, W. H.—On some Recent Work of the Geological Society. Presidential Address. *Quart. Journ. Geol. Soc.*, vol. xlix., *Proc.*, pp. 65-142.
- 42 HUME, W. F.—Chemical and Micro-Mineralogical Researches on the Upper Cretaceous Zones of the South of England. [Yorkshire, pp. 33-34]. 8vo. Pp. 103. London.
- 43 HUTCHINSON, H. N.—Extinct Monsters. A Popular Account of some of the larger forms of Ancient Animal Life. Ed. 3. Pp. xxii.+270. 8vo. London.
- 44 JEFFS, O. W.—Third Report of the Committee . . . for the collection . . . of Photographs of Geological Interest. . . *Rep. Brit. Assoc.* for 1892, pp. 290-298.
- 45 JONES, E.—Report of the Committee . . . to complete the investigation of the Cave at Elbolton, near Skipton, in order to ascertain whether Remains of Palæolithic Man occur in the Lower Cave Earth. *Rep. Brit. Assoc.* for 1892, p. 266.

- 46 JUKES-BROWNE, A. J.—The Geographical Evolution of the North Sea. *Contemporary Review*, pp. 704-712.
- 47 KENDALL, J. D.—The Iron Ores of Great Britain and Ireland, their mode of occurrence, age and origin, and the methods of searching for and working them; with a notice of some of the iron-ores of Spain. [Yorkshire iron-ores, pp. 34-37, 183-188]. Pp. xvi.+430. 8vo. London. Review in *Min. Mag.*, Nov., p. 251.
- 48 KENDALL, P. F.—The Cause of the Ice Age. [Amplification of paper by P. F. KENDALL and J. W. GRAY. *Rep. Brit. Assoc. for 1892*, p. 708]. *Trans. Leeds Geol. Assoc.*, pt. 8, 1892-3, pp. 53-70.
- 49 — [The Glaciation of] The British Isles. [Chapter] (pp. 137-181) in Wright's 'Man and the Glacial Period.' [Yorkshire on pp. 155-158, 176-178]. Second edition.
- 50 KIDSTON, R.—On *Lepidophloios*, and on the British Species of the Genus. [Halifax Coal-Measures]. *Trans. Roy. Soc., Edinburgh*, vol. xxxvii., pp. 529-563.
- 51 — On the Fructification and Internal Structure of Carboniferous Ferns in their Relation to those of Existing Genera, with Special Reference to British Palæozoic Species. [Yorkshire, pp. 15, 25, 40]. *Trans. Glasgow Geol. Soc.*, vol. ix., pp. 1-56.
- 52 — The Carboniferous Flora of Yorkshire. Second, Third, and Fourth Reports on behalf of the Yorkshire Flora Committee for 1890. *Trans. Yorks. Nat. Union*, pt. 18, pp. 65-82, 83-96, 97-122.
- 53 LACROIX, A.—Les Enclaves des Roches Volcaniques. [The Cleveland dyke at Great Ayton, pp. 653, 654]. Pp. 710. 8vo. Macon.
- 54 LIDDELL, J.—The Mineral Waters at Harrogate. [Analyses]. 8vo. Edinburgh and London.
- 55 LOW, R. B.—Report on an Outbreak of Enteric Fever in certain villages on the River Rye in North Yorkshire, and on the Water Supply of the Malton Urban Sanitary District. *Local Government Board Report*. (No. 67). Pp. 15. Fol. London.
- 56 MALET, H. P.—The Kirkdale Cave. *Land and Water*, Oct. 28th, p. 474.

- 57 MITCHELL, T. CARTER.—[Boulders at] Topcliffe. *Naturalist*, Dec., p. 366.
- 58 MORTIMER, J. R.—Further Observations on the Contents of the Howe Tumulus. *Proc. Yorks. Geol. Soc.*, pp. 242-4.
- 59 NEWTON, E. T.—Examination of the Bones of Animals found in the Tumulus [at Duggleby]. *Proc. Yorks. Geol. Soc.*, p. 241.
- 60 MYRTLE, A. S.—Harrogate Mineral Waters. Ed. 3. [See 1867].
- 61 READE, T. M.—Glacial Geology: Old and New. *Geol. Mag.*, dec. iii., vol. x., pp. 35-37.
- 62 REED, F. R. COWPER.—Woodwardian Museum Notes. [Cyclus and abnormal forms of *Spirifera lineata* from Settle]. *Geol. Mag.*, dec. iii., vol. x., pp. 63-65, 249-251.
- 63 RICKETTS, C.—On some Conditions existing during the Formation of the older Carboniferous Rocks. [Horton and Ingleton]. *Proc. Liverpool Geol. Soc.*, vol. vii., pt. 1, pp. 94-106.
- 64 ROBERTS, A.—The Mineral Waters at Harrogate. [Notes on new analyses]. *Monthly Homœopathic Review*, vol. xxxvii., pp. 272-286. Reprinted under the title 'The Harrogate Mineral Waters and Homœopathy.' [Chemical notes, p. 4]. Pp. 16. 8vo. London.
- 65 SEELEY, H. G.—On *Omosaurus phillipsi* [from the Jurassic Rocks near Slingsby]. *Ann. Rep. Yorks. Phil. Soc.* for 1892, pp. 52-57.
- 66 SPENCER, J.—Glacial Boulders in Calderdale. *Naturalist*, pp. 75-79.
- 67 ——— [Boulders at] Luddendenfoot [etc.]. *Naturalist*, Dec., p. 367.
- 68 STATHER, J. W.—Yorkshire Naturalists at Askern. *Trans. Leeds Geol. Assoc.*, pt. 8, p. 99, and *Naturalist*, Oct., p. 291-2.
- 69 ——— [See W. L. Carter].
- 70 ——— [Boulders at] Atwick and Skipsea. *Naturalist*, Dec., p. 367.
- 71 SWAIN, W. T.—Popular Guide to Boroughbridge and the surrounding District, including Ripon, York, Harrogate, Knaresborough, Skelton, Myton, Hackfall, Helmsley,

- Coxwold, Whixley, Marston Moor, Aldbrough, etc.; and containing sketches of the principal places of interest. [Devil's Arrows, pp. 33-37]. Pp. 75. 8vo. *Borough-bridge*.
- 72 TATE, T.—The Yorkshire Boulder Committee and its sixth year's work. [Erratics from near Market Weighton, Winestead, Scarborough, Ribblesdale, Ingleton, etc.]. *Naturalist*, pp. 109-111.
- 73 ——— The Yorkshire Boulder Committee and its seventh year's work. [Erratics from the Lune Valley, Hull, Halifax, Wakefield, Masham, Ripon, Thirsk]. *Naturalist*, pp. 363-368.
- 74 THOMPSON, T. W.—Report of the Local Government Board on the General Sanitary Condition of the York Rural Sanitary District (No. 65). Pp. 18. *Local Government Board Report*. Fol. London.
- 75 TUTE, J. S.—On some singular nodules in the Magnesian Limestone. [Wormald Green]. *Proc. Yorks. Geol. Soc.*, vol. xii., pt. 3, pp. 245, 246.
- 76 ——— The Occurrence of a Tooth of a Mastodon [? Mammoth] in the Glacial Drift. *Ibid.*, p. 246.
- 77 VINE, G. R.—Notes on the Polyzoa, Stomatopora, and Proboscina Groups, from the Cornbrash of Thrapston, Northamptonshire. [Yorkshire specimens]. *Proc. York. Geol. Soc.*, vol. xii., pt. 3, pp. 247-258.
- 78 W[HITE], E. R.—Excursion to Coxwold and Byland. *Trans. Leeds Geol. Assoc.*, pt. 8, pp. 94, 95.
- 79 WALLACE, A. R.—The Ice Age and its Work. I., Erratic Blocks and Ice-Sheets. II., Erosion of Lake Basins. *Fortnightly Review*, vol. liv., pp. 616-633, 750-774.
- 80 WALKER, J. F.—On the Brachiopoda recently discovered in the Yorkshire Oolites. [Scarborough and Hackness]. *Ann. Rep. Yorks. Phil. Soc.*, for 1892, pp. 47-51.
- 81 WATTS, W.—Singular Nodules and Ice-worn Stones found in the Boulder Clay of Piethorn Valley. *Trans. Manchester Geol. Soc.*, vol. xxii., pt. 13, pp. 436-439, Discussion, pp. 439-442.
- 82 WHEELER, W. H.—Tidal Rivers, their Hydraulics, Improvement, Navigation. Pp. viii.+467. Roy. 8vo. London.
- 83 WILLIAMSON, W. C.—On the Organisation of the Fossil

- plants of the Coal-Measures. Pt. 19. [Wakefield, Dewsbury, etc.]. *Phil. Trans.*, vol. clxxxiv B., pp. 1-38.
- 84 WILLIAMSON, W. C.—General Morphological and Histological Index to the Author's Collective Memoirs on Fossil Plants of the Coal-Measures. Pt. 2. *Proc. Manchester Lit. Phil. Soc.*, ser. 4, vol. vii., pp. 91-127.
- 85 WOODS, HENRY.—Elementary Palæontology. Invertebrate. *Cambridge*. Pp. viii.+222. [See also 1896, 1902, 1909].
- 86 ——— Catalogue of the Fossils in the Students' Stratigraphical Series. *Cambridge*. Pp. 23.
- 87 WOODWARD, A. S.—On some British Upper-Jurassic Fish-remains, of the genera *Caturus*, *Gyrodus*, and *Notidanus* [*G. punctatus*, from Malton]. *Ann. Mag. Nat. Hist.*, ser. 6, vol. xii., pp. 398-402.
- 88 WRIGHT, G. FREDERICK.—Man and the Glacial Period. [Includes chapter dealing with Yorkshire, etc., by P. F. Kendall]. Second edition, pp. xiv.+385.

## 1894.

- 1 ANON.—Encroachment of the Sea [at Hornsea]. Fretwell's Illustrated Guide to Hornsea, N.D. [May 1894], pp. 62-64.
- 2 ——— Reports of the Inspectors of Mines. *Parliamentary Reports*. Fol. *London*.
- 3 ——— Reports of Field Excursions [of the Hull Geological Society during 1893. Filey, p. 8; Scalby, and Hackness, p. 9; Aldborough, pp. 9, 10; Askern, pp. 10, 11; Kirby, Speeton, p. 11; North Grimston, Langton Wold and Robin Hood's Bay, p. 12; Beverley and Walkington, pp. 12, 13]. *Trans. Hull Geol. Soc.*, vol. i., 1893-4.
- 4 ——— Map of the Collieries in South and West Yorkshire, showing the Railways. 39½ ins. by 24 ins.
- 5 ——— Field Excursion to . . . Bradford. *Proc. Yorks. Geol. and P. Soc.*, vol. xii., pt. 5, p. 441.
- 6 ——— [M. E.]—The Yorkshire Coalfield. [Birley Collieries, pp. 992, 1024; Nunnery Collieries, 1074; Hickleton Main Colliery, p. 1117; Nostell Colliery, p. 1161]. *Coll. Guard.*, vol. lxviii.

- 7 ANON.—[Additions to the] Museum. [Oolitic Fossils, etc.].  
*Ann. Rep. Yorks. Phil. Soc.* for 1893, pp. 30-2.
- 8 BEVAN, G. P.—Tourist's Guide to the West Riding. Ed.  
6. [See 1877].
- 9 BOYLE, J. R.—The Isle of Axholme and the Level of Hatfield  
Chase. (Abstract). *Trans. Hull Geol. Soc.*, vol. i.,  
pp. 15, 16.
- 10 BRADY, G. S.—Address to the Members of the Tyneside  
Naturalists' Field Club. [Meeting at Knaresborough,  
June 24th, 1892]. *Trans. Northumberland Durham Nat.  
History Soc.*, vol. xi., pp. 295-314.
- 11 BROWN, A.—On the Structure and Affinities of the genus  
*Solenopora*, together with Descriptions of New Species  
[including *S. jurassica*, from Malton]. *Geol. Mag.*, dec.  
iv., vol. i., pp. 145-151.
- 12 BUCKMAN, S. S.—Jurassic Ammonites: On the Genus  
*Cymbites* Neumayr. [*C. subcarinatus* from the Yorkshire  
Lias]. *Ibid.*, pp. 357-363.
- 13 BULMAN, H. F.—The Denaby and Cadeby Main Collieries  
and the South Yorkshire Junction Railway. [Section  
of Barnsley Bed, p. 30]. *Journ. Brit. Soc. Min. Students*,  
vol. xvi., 1893-94, pp. 24-34.
- 14 CARTER, W. L.—Yorkshire Naturalists in Mid-Ribblesdale  
[between Sawley and Gisburn]. *Naturalist*, pp. 10, 11.
- 15 CASH, W.—Obituary. James William Davis. [With list  
of Memoirs, etc.]. *Proc. Yorks. Geol. Soc.*, vol. xii.,  
pt. 4, pp. 319-334.
- 16 COLE, E. M.—Flamborough Village and Headland, edited  
by R. FISHER. [The Geology of Flamborough Head  
with detailed sections of the Upper and Lower Cretaceous  
Rocks, and a geological sketch map]. PP. xi., 179.  
8vo. *Hull*.
- 17 CRICK, G. C.—[See A. H. Foord].
- 18 CROFTS, W. H.—[Boulders at] Cottingham. *Trans. Hull  
Geol. Soc.*, vol. i., p. 7, also *Naturalist*, Oct., p. 302.  
8vo. *London*. [See 1874].
- 19 CROSSKEY, H. W.—Twenty-first Report . . . on Erratic  
Blocks. [Topcliffe, York, p. 523]. *Rep. Brit. Assoc. for  
1893*, pp. 514-523.
- 20 ——— [See H. Carvill Lewis].



- 21 DAKYNS, J. R.—A Sketch of the Geology of Nidderdale and the Washburn North of Blubberhouses. [Anticlines west of Harrogate]. *Proc. Yorkshire Geol. Soc.*, vol. xii., pt. 4, pp. 294-299.
- 22 ——— Glacial Phenomena of Wharfedale between Bolton Abbey and Kettlewell. *Ibid.*, pp. 299-305.
- 23 DAMES, W.—[See G. J. Hinde].
- 24 DE RANCE, C. E.—On the Glacial Sands and Gravels at Heck Station, Yorkshire. [Borings near Goole and Selby]. *Glacialists' Mag.*, vol. i., No. 6, pp. 131-134.
- 25 ——— Twentieth Report . . . on Underground Water . . . [Goole, Snaith, West Cowick, Pontefract, Booth Ferry Road, pp. 298-300]. *Rep. Brit. Assoc. for 1894*, pp. 283-302.
- 26 DIBLEY, [G. E.]—A paddle of Ichthyosaurus from Whitby, with remains of the integument. *Proc. Geol. Assoc.*, vol. xiii., pt. 6, p. 187.
- 27 D[WERRYHOUSE], A. R.—Current Glacial Bibliography. [*Geol. Mag. for 1893*] *Glacialists' Mag.*, Feb., pp. 159-166; March, pp. 187-9.
- 28 EVANS, —.—Report on the Outbreak of Enteric Fever at Pocklington, Yorkshire. *Local Government Board Rep.* Pp. 9. Fol. London.
- 29 FIERKE, F. W.—The Mollusca of Hornsea. [*Planorbis fontanus* from a lacustrine deposit at Skipsea], p. 55 of Fretwell's Guide to Hornsea. Pp. 65. 8vo. Hull.
- 30 FISHER, ROBERT.—Flamborough Village and Headland. Hull. 179 pp. [See E. M. Cole].
- 31 FOSTER, CLEMENT LE NEVE.—A Treatise on Ore and Stone Mining. 1st ed.; [there have been six subsequent editions, the 7th being revised by S. Herbert Cox, 1910 (which see)].
- 32 FOORD, A. H., and G. C. CRICK.—On *Temnocheilus coronatus* M'Coy from the Carboniferous Limestone of Stebden Hill, near Cracoe, Yorkshire. *Geol. Mag.*, dec. iv., vol. i., pp. 295-298.
- 33 FOX-STRANGWAYS, C.—The Valleys of North-East Yorkshire and their Mode of Formation. *Trans. Leicester Lit. Phil. Soc.*, vol. iii., pt. 7, pp. 333-344.

- 34 FOX-STRANGWAYS, C.—Dr. Alex. Brown on *Solenopora* [*S. jurassica* from Malton]. *Geol. Mag.*, dec. iv., vol. i., p. 236.
- 35 ——— The Geology of the . . . Rocks South of Scarborough. Ed. 2. [See 1880].
- 36 GARSON, J. G.—Early British Races. [River Gravels, etc.]. *Proc. Roy. Inst. Gt. Brit.*, vol. xiv., 1893-95, pp. 248-258.
- 37 GEIKIE, A.—Annual Report of the Geological Survey and Museum of Practical Geology for 1893. *London*.
- 38 GEIKIE, J.—The Great Ice Age. Ed. 3. Largely rewritten, with maps and illustrations. Pp. xxviii.+850. 8vo. *London*. [See 1874].
- 39 GERARD, J.—Stonyhurst College: its life beyond the seas, 1592-1794, and on English soil, 1794-1894. [Geology Hodder Valley and Clitheroe, pp. 276-280]. Pp. xiv.+292. 4to. *Belfast*.
- 40 GORDON, Mrs. E. O.—The Life and Correspondence of William Buckland. [Kirkdale Cave, pp. 56-62]. Pp. xvi.+288. 8vo. *London*.
- 41 GREGORY, J. W.—Catalogue of the Jurassic Bryozoa in the York Museum. [With figures at *Stromatopora smithi* Phil. and *Pustulopora straminea* Phil.]. *Ann. Rep. Yorks. Phil. Soc.* for 1893, pp. 58-61.
- 42 ——— [Review of] Man and the Glacial Period. *Glac. Mag.*, July, pp. 263-266.
- 43 GREGSON, W.—[Boulders at] Kirklington. [etc.]. *Naturalist*, Oct., p. 301.
- 44 GROOM, T. H.—The Effect of Faults on the Character of the Seashore [refers to Ingleborough]. *Proc. Yorks. Geol. and P. Soc.*, vol. xii., pt. 5, pp. 361-8.
- 45 HARKER, A.—‘Chapters in the Geological History of East Yorkshire.’ *Trans. Hull Geol. Soc.*, vol. i., pp. 18-24.
- 46 ——— Norwegian Rocks in the English Boulder-Clays. *Geol. Mag.*, dec. iv., vol. i., pp. 334-335.
- 47 ——— Boulders of Elæolite-Syenite in East Yorkshire. *Ibid.*, pp. 477-478.
- 48 ——— Sir H. Howorth on the Holderness Boulders. *Ibid.*, pp. 565-566.

- 49 HEMINGWAY, W.—[Boulders at] Staincross. *Naturalist*, Oct., pp. 299-300.
- 50 HICK, T.—On the Primary Structure of the Stem of Calamites. *Mem. Proc. Manchester Lit. Phil. Soc.*, ser. 4, vol. viii., pp. 158-170.
- 51 ——— On *Calamostachys binneyana* Schimp. *Proc. Yorks. Geol. Soc.*, vol. xii., pt. 4, pp. 279-293.
- 52 HIND, W.—A Monograph on Carbonicola, Anthracomya, and Naiadites. Part I. [Yorkshire, pp. 2, 3, 6, 49, 53, 60, 66, 67, 75]. Pp. 1-80; Plates i.-xi. *Monogr. Pal. Soc.*, vol. xlviii. for the year 1894.
- 53 H[INDE], G. J.—[Review of] Ueber die Gliederung der Flötzformationen Helgolands, VON W. DAMES [compares with Speeton Fossils]. *Geol. Mag.*, Feb., pp. 84-5.
- 54 H[OBKIRK], C. P.—Nidderdale and its Natural History. [See also Harry Speight]. *Naturalist*, Nov., pp. 334-6.
- 55 HOWARTH, J. H.—The Yorkshire Naturalists' Union at Sedburgh. *Naturalist*, July, pp. 222-4.
- 56 HOWORTH, H. H.—The Most Recent Changes of Level and their Teaching. Part I. The Raised Beaches. [Part II.]. The Rapid Collapse of Some Districts at the Close of the Mammoth Age. *Geol. Mag.*, dec. iv., vol. i., pp. 257-263, 405-413.
- 57 ——— The Primitive Boulders of the Yorkshire Coast and their Lessons: A Reply to Two Critics. *Ibid.*, pp. 371-375.
- 58 ——— Mr. Harker and Mr. Deeley on the Scandinavian Ice-Sheet. *Ibid.*, pp. 496-499.
- 59 ——— The North Sea Ice Sheet. [Explanation of the occurrence of Norwegian boulders on the Yorkshire Coast]. *Nature*, vol. 1., May 24th, p. 79.
- 60 HUDLESTON, W. H.—On Some Recent Work of the Geological Society. Part 2. Presidential Address. *Quart. Journ. Geol. Soc.*, vol. 1., Proc., pp. 65-142.
- 61 ——— A Monograph of the British Jurassic Gasteropoda. Part 1, No. 7. Gasteropoda of the Inferior Oolite. [Yorkshire, pp. 333, 334, 335, 368, 380]. Pp. 325-390. Plates xxvii.-xxxii. *Monogr. Pal. Soc.*, vol. xlviii. for the year 1894.

- 62 HUGHES, T. McK.—Caves and Cave Deposits. [Includes details of the Ingleborough Caves]. *Proc. Chester Soc. Nat. Sci.*, No. 4, pp. 141 *et seq.* [See Review in *Naturalist*, pp. 241-2].
- 63 HULL, E.—The Great Submergence. *Glac. Mag.*, Feb., vol. i., pp. 167-169, and April, p. 208.
- 64 HUME, W. F.—The Genesis of the Chalk. [Division of the Yorkshire Chalk, p. 219]. *Proc. Geol. Assoc.*, vol. xiii. pt. 7, pp. 211-246.
- 65 JEFFS, O. W.—Fourth Report of the Committee . . . for the collection . . . of Photographs of Geological Interest . . . *Rep. Brit. Assoc.* for 1893, pp. 473-482.
- 66 ——— Fifth Report of the Committee . . . for the collection . . . of Photographs of Geological Interest. . . . *Rep. Brit. Assoc.* for 1894, pp. 274-283.
- 67 JONES, E.—Report of the Committee . . . to complete the investigation of the Cave at Elbolton, near Skipton. *Rep. Brit. Assoc.* for 1894, pp. 270, 271.
- 68 ——— Exploration of the Calf-Hole Cave of the Heights, Skyethorne, near Skipton. *Ibid.*, pp. 272-273.
- 69 JONES, T. R.—On the Rhætic and some Liassic Ostracoda of Britain. [*Bairdia liassica* from Yorkshire, pp. 159, 164]. *Quart. Journ. Geol. Soc.*, vol. l., pp. 156-169].
- 70 KENDALL, P. F.—Geological Observations upon some Alpine Glaciers. [Comparison with the ancient glaciers of Britain]. *Glac. Mag.*, vol. ii., pp. 43-50, 63-68, 83-90 (1894), vol. ii., pp. 120-123. 127-132 (1895).
- 71 ——— Man and the Glacial Period. [Abstract of a lecture, Victoria Cave, etc.]. *Trans. Hull Geol. Soc.*, vol. i., pp. 13-15.
- 72 ——— Twenty-first Report of the Committee . . . Erratic Blocks . . . [Yorkshire, pp. 522, 523]. *Rep. Brit. Assoc.* for 1893, pp. 514-523.
- 73 ——— The Glaciation of Yorkshire. [Map of the Vale of York]. *Proc. Yorks. Geol. Soc.*, vol. xii., pt. 4, pp. 306-318.
- 74 ——— 'The Jurassic Rocks of Britain' [review of]. *Glac. Mag.*, June, pp. 249-250.
- 75 KIDSTON, R.—On the Various Divisions of the British Carboniferous Rocks as determined by their Fossil

- Flora. Vice-Presidents' Address. *Proc. Roy. Phys. Soc. Edinburgh*, vol. xii., 1892-94, pp. 183-257.
- 76 LAMPLUGH, G. W.—Notes upon the Snowfall of the Glacial Period. *Glac. Mag.*, vol. i., No. 11, pp. 231-233.
- 77 ———Review, Papers and Notes on the Glacial Geology of Great Britain and Ireland. By the late Henry Carvill Lewis. *Glac. Mag.*, vol. ii., No. 2, pp. 23-27.
- 78 LEWIS, H. CARVILL.—Papers and Notes on the Glacial Geology of Great Britain and Ireland. [Glaciation of Yorkshire, pp. 172-247]. Introduction, pp. xxxi.-lxxxii., by W. H. CROSSKEY. 8vo. *London*. Pp. 469.
- 79 LOMAS, J.—The Great Submergence [discussing a paper by Prof. Hull, which appeared in a previous issue]. *Glac. Mag.* Pp. 134-137.
- 80 LUPTON, A.—Geology of the West Yorkshire Coalfield. *Trans. Fed. Inst. Min. Eng.*, vol. vii., pp. 137-144. Discussion, pp. 144-148; *Trans. Midl. Inst. Min. Eng.*, vol. xiii., pp. 215-222; Discussion, pp. 222-226.
- 81 MACQUOID, THOMAS and KATHARINE.—About Yorkshire. *London*. pp. 351.
- 82 McMURTRIE, G. E. J.—Rockingham Colliery. [Section of Parkgate and Thorncliffe Seams, p. 84]. *Journ. Brit. Soc. Min. Students*, vol. xvi., 1893-94, pp. 79-84; *Coll. Guard.*, vol. lxvii., p. 510.
- 83 MONKTON, H. W.—On a Variety of Ammonites (*Stephanoceras subarmatus* Young) from the Upper Lias of Whitby. *Quart. Journ. Geol. Soc.*, vol. l., Proc. p. 4; Abstract *Geol. Mag.*, dec. iv., vol. i., p. 91.
- 84 NICHOLSON, J.—[Boulders at] Swine. *Naturalist*, Oct., pp. 302-3, and *Trans. Hull Geol. Soc.*, vol. i., p. 8.
- 85 PARRISH, W. S.—[Boulders on] the Yorkshire Wolds. *Trans. Hull Geol. Soc.*, vol. i., p. 6.
- 86 PLATNAUER, H. M.—Appendix to the List of Figured Specimens in the Museum of the Yorkshire Philosophical Society. *Ann. Rep. Yorks. Phil. Soc.* for 1893, pp. 46-56.
- 87 ——— Borings made in the neighbourhood of York. [Raskelf and Huby in the Vale of York]. *Ibid.*, pp. 56, 57.
- 88 QUAIN.—[See H. Weber].

- 89 RAMSAY, A. C.—The Physical Geology and Geography of Great Britain. Ed. 6, by H. B. Woodward. Pp. xv. + 421. 8vo. *London*.
- 90 REYNOLDS, R.—[Obituary of] Thomas William Embleton [one of the founders of the Society]. *Proc. Yorks. Geol. Soc.*, vol. xii., pt. 4, pp. 335-339.
- 91 REYNOLDS, S. H.—Woodwardian Museum Notes. Certain Fossils from the Lower Palæozoic Rocks of Yorkshire. *Geol. Mag.*; dec. iv., vol. i., pp. 108-111.
- 92 ROBERTS, A.—The Harrogate Mineral Waters. New Analyses with Observations. *Monthly Homœopathic Review*, vol. xxxviii., pp. 443, 444, also pp. 48. 8vo. *Harrogate*.
- 93 ROBINSON, J. F.—[Boulders at] Sutton-on-Hull. *Trans. Hull Geol. Soc.*, vol. i., p. 7, and *Naturalist*, Oct., p. 303.
- 94 SEWARD, A. C.—Notes on the Bunbury Collection of Fossil Plants, with a list of type specimens in the Cambridge Botanical Museum [*Pecopteris exilis* Phil.]. *Proc. Cambridge Phil. Soc.*, vol. viii., pt. 3, pp. 188-199.
- 95 SHONE, W.—Post-Glacial Man in Britain. *Geol. Mag.*, dec. iv., vol. i., pp. 78-80.
- 96 SLATER, G.—Impressions of the Science of Geology. [Chiefly Carboniferous of Yorkshire]. *The White Rose*, the Magazine of the past and present students of St. John's College, York. Vol. iii., No. 3. April, pp. 43-46.
- 97 SPEIGHT, H.—Nidderdale and the Garden of the Nidd; a Yorkshire Rhineland. Being a complete account, Historical, Scientific, and Descriptive of the beautiful valley of the Nidd. [Geological and Natural History notes]. 8vo. *London*. Reviewed by C. P. HOBKIRK. *Naturalist*, pp. 334-336.
- 98 STATHER, J. W., and others.—Report of the East Riding Boulder Committee, 1893-94. *Trans. Hull Geol. Soc.*, vol. i., pp. 6-8.
- 99 ——— [Geological Report for the] Yorkshire Naturalists' Union at Pocklington. *Naturalist*, pp. 66, 67.
- 100\* ——— The geology [of Hornsea, pp. 59-64 of] Fretwell's Guide to Hornsea. Pp. 65. 8vo. *Hull*, no date [1894].
- 101 STEVENSON, W.—Ancient Forest Bed under the Town of

- Hull. [Explaining photograph]. *Trans. Hull Geol. Soc.*, vol. i., p. 25.
- 102 STIRRUP, M.—A Reply to Sir H. Howorth's Paper on 'Recent Changes of Level.' *Geol. Mag.*, dec. iv., vol. i., pp. 502-505.
- 103 TATE, T.—The Yorkshire Boulder Committee and its Eighth's Year's Work. [Erratics from Kirklington and Baldersby]. *Naturalist*, Oct., pp. 297-303.
- 104 THELWALL, T.—[Boulders at] Skidby, etc. *Naturalist*, Oct., p. 302, and *Trans. Hull Geol. Soc.*, vol. i., p. 7.
- 105 UPHAM, W.—The Quaternary Epoch, and its division in the Lafayette, Glacial, and Recent Periods. [Yorkshire compared with other parts of the globe]. *Congress Geol. Internat.*, Session 6 (Zurich), pp. 238-251.
- 106 ——— Quaternary Time Divisible into Three Periods, the Lafayette, Glacial and Recent. *Proc. Amer. Assoc. Adv. Sci.*, vol. xliii., 5 pp.
- 107 WALTON, F. F.—[Boulders at] Newbald. *Naturalist*, Oct., p. 302, and *Trans. Hull Geol. Soc.*, vol. i., p. 6.
- 108 WATTS, W.—Septarian Nodule from the boulder clay of the Piethorn Valley. *Trans. Manchester Geol. Soc.*, vol. xxii., pp. 589-599.
- 109 WATTS, W. W.—Appendix on some Boulders collected by Mr. Cameron. [In Huntingdonshire; some of which resemble boulders from East Yorkshire]. *Proc. Geol. Assoc.*, vol. xiii., pp. 359, 360.
- 110 WEBER, H.—Mineral Waters. *Quain's Dictionary of Medicine*, ed. 2, pp. 139-147. [See 1882].
- 111 WILLIAMS, T. R.—The Anthracite District of South Wales. [Analysis of Barnsley Coal]. *Trans. Hull Geol. Soc.*, vol. i., p. 7.
- 112 WILLIAMSON, W. C.—General, Morphological, and Histological Index to the Author's Collective Memoirs on the Fossil Plants of the Coal Measures. Part 3., *Mem. Proc. Manchester Lit. Phil. Soc.*, vol. viii., No. 2, pp. 54-74.
- 113 ——— On the Organisation of the Fossil Plants of the Coal Measures. Part 19. [Yorkshire species]. *Phil. Trans.* vol. clxxxiv. B for the year 1893, pp. 1-38.

- 114 WOODWARD, A. S.—On a Second British Species of the Jurassic Fish *Eurycormus* [from Peterborough. The type specimen was from Speeton]. *Geol. Mag.*, dec. iv., vol. i., pp. 214-216.
- 115 WOODWARD, H.—Contributions to our Knowledge of the genus *Cyclus* from the Carboniferous Formation of various British Localities. [*C. woodwardi* Reed, from Settle]. *Geol. Mag.*, dec. iv., vol. i., pp. 530-539.
- 116 ——— Note on a Collection of Carboniferous Trilobites from the Banks of the Hodder, near Stonyhurst, Lancashire. *Ibid.*, pp. 481-489.
- 117 WOODWARD, H. B.—Geology in the Field and in the Study. *Proc. Geol. Assoc.*, vol. xiii., part 7, pp. 247-273.

1895.

- 1 ANON.—Field Excursion to Broad Lane Junction, Bradford. [Crow Coal, Black Band and Better Bed Coal exposed]. *Proc. Yorks. Geol. Soc.*, vol. xii., pt. 5, p. 441.
- 2 ——— Professor William C. Williamson, LL.D., F.R.S. [Obituary Notice]. *Geol. Mag.*, dec. iv., vol. ii., pp. 383, 384. *Proc. Yorks. Geol. Soc.*, vol. xiii., pt. 1, pp. 95-102; *Memoirs and Papers*, pp. 103-111.
- 3 ——— Meeting of the Glacialists' Association [at York, April 27th, 1895. York Moraines]. *Glac. Mag.*, vol. iii., pp. 41-43.
- 4 ——— Historical Note on Malton Spa. [Geological notes]. *Naturalist Notes*, vol. i., pp. 48, 49.
- 5 ——— Important Excavations at Malton [in connection with the North Eastern Railway extensions]. *Ibid.*, pp. 63-65.
- 6 ——— Gaping Ghyll. [Ingleborough, note of Martel's Exploration]. *Naturalist's Journ.*, vol. iv., p. 202.
- 7 ——— Report of the Boulder Committee. [Boulders noted on the Holderness Coast between Withernsea and Hornsea, pp. 6, 7; Burstwick, Melton, Bessingby, Swine, and Hessle, p. 8]. *Trans. Hull Geological Soc.*, vol. ii., pp. 6-8.
- 8 ——— Reports of Field Excursions during 1894. [South Ferriby, South Cave, Bridlington, Filey, Skipsea, Ulrome,



- Hessle, Knaresborough, Spurn, Dimlington and Drewton Dale. *Trans. Hull Geol. Soc.*, vol. ii., pp. 9-15.
- 9 ANON.—[M.E.].—The Yorkshire Coalfield. [Rockingham, p. 17; Cadeby, pp. 64, 65; Lofthouse, pp. 113, 114; Thorncliffe, etc., p. 159; Acton Hall, pp. 207, 208; Lidgett, pp. 255, 256; Garforth, 304, 305; Bruntcliffe, pp. 353, 354; Micklefield, p. 400; Wheldale, pp. 448, 449; Kiveton Park, pp. 1029, 1030]. *Coll. Guard.*, vol. lxix.
- 10 ——— A Field Meeting [Clapham]. *Journ. Liverpool Geol. Assoc.*, vol. xxv., p. 19.
- 11 ——— Geological Excursion to Saltersgate and Winny Nab. *Nat. Notes*, vol. i., p. 27.
- 12 ——— Geological Literature added to the Geological Society's Library during the half-year ended Dec., 1894. 58 pp.
- 13 ——— Malton Naturalists' Society. Presentation to Mr. S. Chadwick. *North and East Yorks. Science Notes*, Sept., pp. 25-29.
- 14 ——— The Geological Survey. [Review]. *Geol. Mag.*, Dec., pp. 567-569.
- 15 ——— The Yorkshire Naturalists' Union at Flamborough. *North and East Yorks. Science Notes*, July, pp. 11-12.
- 16 ——— Current Glacial Bibliography. *Proc. Yorks. and Polyt. Soc.*, n. s., vol. iii., pt. 5; *Glac. Mag.*, Dec., pp. 162-3.
- 17 ——— Meeting of the Glacialists' Association [at York]. *Glac. Mag.*, June, pp. 41-43.
- 18 ——— Home Office. Mining Reports. Annual General Reports upon the Mineral Industry of the United Kingdom of Great Britain and Ireland . . . Prepared by H. M. Inspectors of Mines, 1894, etc. Fol. London. [See also Hunt, R., 1855, Reports, 1884, 1897].
- 19 ATKINSON, J. B.—Home Department, Mineral Statistics of the United Kingdom . . . for the year 1894. London.
- 20 ——— List of Mines in the United Kingdom . . . for the year 1894. London.
- 21 BEDFORD, J. E.—[See W. L. Carter].
- 22 BLACK, J. GORDON.—Health Resorts. Harrogate. *Quart. Med. Journ.*, vol. vi., pp. 47-59.
- 23 BLAKE, J. F.—Annals of British Geology, 1893. A Digest

- of the Books and Papers published. . . . Pp. xxiv. + 365.  
*London.*
- 24 BONNEY, T. G.—Supplementary Note on the Narborough District (Leicestershire) [refers to Yorks.]. *Quart. Journ. Geol. Soc.*, vol. li., pt. 1, Feb., pp. 24-34.
- 25 BOTHAMLEY, C. H.—The Mineral Waters of Askern in Yorkshire. [Analyses compared with those of Harrogate] *Proc. Yorks. Geol. Soc.*, vol. xii., pt. 5, pp. 347-360.
- 26 BOYLE, J. R.—The Early History of the Town and Port of Hedon, in the East Riding of the County of York [refers to topographical changes]. *Hull*, pp. xvi. + 227 + ccl.
- 27 BRIERLEY, H.—The Yorkshire Gypsey-Springs [at Wold Newton]. *Nature*, vol. liii., p. 177.
- 28 BROWNE, A. J. JUKES.—[See under A. J. Jukes-Browne].
- 29 BURTON, J.—[Boulders at] Todmorden, Mirfield and Horbury. *Naturalist*, Dec., pp. 340-341.
- 30 CALKER, F. T. P. VAN.—A Scheme for Perfecting the Determination of Boulders. *Glac. Mag.*, Dec., pp. 132-138.
- 31 CANTRILL, T. C.—On the occurrence of Spirorbis-limestone and thin Coals in the so-called Permian Rocks of Wyre Forest; with Considerations as to the Systematic Position of the 'Permians.' of Solopian Type. [Compared with the rocks of Yorkshire, pp. 544, 545]. *Quart. Journ. Geol. Soc.*, vol. li., pp. 528-548.
- 32 CARRINGTON, J. S.—Mineralogy. [Peacock Coal at Barnsley]. *Sci. Goss.*, n.s., vol. ii., p. 176.
- 33 CARTER, W. L.—Notes on the Field Excursion for the examination of the Coast between Bridlington and Filey. *Proc. Yorks. Geol. Soc.*, vol. xii., pt. 5, pp. 421-423.
- 34 ——— A Peep into Nature's Sculpture Gallery. [Denudation, Yorkshire Coast, etc.]. *Trans. Leeds Geol. Assoc.*, pt. 9, 1893-94, pp. 12-17.
- 35 ——— Reports of Field Excursions. Ripon, P. F. KENDALL, pp. 64-67; Marsh Lane Cutting, Leeds, B. HOLGATE, p. 67; Kirkby Moorside, W. L. CARTER and J. W. STATHER, pp. 68-70; Bolton and Easby, R. H. TIDDEMAN, pp. 70-72; Gisburn and Sawley Abbey, R. H. TIDDEMAN, pp. 72-74; Wetherby, J. E. BEDFORD, pp. 74-76; Rombald's

- Moor, P. F. KENDALL, pp. 76-78; Pocklington, J. W. STATHER, p. 78; Marsh Lane Cutting, Leeds, P. F. KENDALL, pp. 80, 81; Sedbergh, pp. 81-83; Ferrybridge, p. 83. *Trans. Leeds Geol. Assoc.*, Part 9, 1893-94, pp. 64-83, and *Naturalist*, April, p. 111.
- 36 CLODD, E.—The Story of 'Primitive' Man. [Yorkshire Caves noticed]. Pp. 206. Sm. 8vo. *London*.
- 37 COLE, E. M.—The Yorkshire Naturalists' Union at the Hole of Horcum. *Naturalist*, pp. 211, 212; *Naturalists' Notes*, vol. i., 1894-95, p. 27.
- 38 — Description of Photograph of Boulder Clay Cliffs, Carr Naze, Filey. *Proc. Yorks. Geol. Soc.*, vol. xii., pt. 5, pp. 442-446.
- 39 COLLINSON, E. B.—A Natural History Excursion to Coxwold. *Nat. Hist. Journ.*, Oct. 15th, p. 103.
- 40 CRICK, G. C.—On a new species of *Prolecanites* from the Carboniferous Limestone of Haw Bank Tunnel, Skipton, Yorkshire. *Trans. Manchester Geol. Soc.*, vol. xxiii., pt. 3, pp. 80-88.
- 41 DAVIS, W. M.—On the Development of Certain English Rivers. [Refers to the Trent, Humber, Tees, etc.; Yorkshire, pp. 141-143]. *Geog. Journ.*, Feb. pp. 127, *et seq.*
- 42 DE RANCE, C. E.—Fourth Report . . . on Erosion of Sea-coast . . . [Humber, p. 377; Yorkshire Coast, pp. 381-386]. *Rep. Brit. Assoc. for 1895*, pp. 352-387, Bibliography, pp. 388-392.
- 43 — On Glacial Theories, Past and Present, and their application to Staffordshire. [Yorkshire noticed]. *Trans. N. Stafford. Nat. Field Club*, vol. xxix., pp. 107-128.
- 44 DICKONS, J. NORTON.—A Catalogue of Books, Pamphlets, etc., published at Bradford, in the County of York. *Bradford*. 8vo. 241 pp.
- 45 DONALD, MISS J.—Notes on the Genus *Murchisonia*, and its Allies; with a Revision of the British Carboniferous Species, and Descriptions of some New Forms. *Quart. Journ. Geol. Soc.*, vol. li., pp. 210-234; *Geol. Mag.*, dec. iv., vol. ii., pp. 185-186.
- 46 DURNFORD, H. ST. JOHN.—The Sinkings at Acton Hall Colliery, with special reference to the thinning out of the Silkstone and Beeston Seams. *Coll. Guard.*, vol. lxx.,

- p. 1165 ; *Trans. Fed. Inst. Min. Eng.*, vol. x., pp. 444-451, Discussion, pp. 451-454, 1896.
- 47 D[WERRYHOUSE], A. R.—Current Glacial Bibliography. *Nature*, vol. lx. ; *Glac. Mag.*, March, pp. 159-162.
- 48 FOORD, A. H.—A Short Account of the Ammonites and their Allies, as Exhibited in the Cephalopod Gallery of the British Museum (Natural History). [From the Upper Lias of Yorkshire]. *Geol. Mag.*, dec. iv., vol. ii., pp. 391-400.
- 49 GARROD, A. E., and others.—The Climates and Baths of Great Britain, being the report of the Committee of the Royal Medical and Chirurgical Society of London. [Harrogate, by M. MORRIS and F. PENROSE, pp. 540-557]. 2 vols. 8vo. *London*. Vol. ii., 1902.
- 50 GARWOOD, E. J., and J. E. MARR.—Zonal Divisions of the Carboniferous System. [Settle, Wensleydale, etc.]. *Geol. Mag.*, dec. iv., vol. ii., pp. 550-552 ; *Rep. Brit. Assoc.*, for 1895, p. 696.
- 51 GEIKIE, ARCHIBALD.—Annual Report of the Geological Survey . . . for . . . 1894. Pp. 267-300 of the 42nd *Rep. Dept. of Science and Art*.
- 52 GEIKIE, JAMES.—Classification of European Glacial Deposits [brief references to Yorkshire]. *Journ. of Geology*. (*Chicago*). Vol. iii., No. 3, April, pp. 241-269.
- 53 GREGORY, J. W.—A Revision of the Jurassic Bryozoa. Pt. 1. The Genus *Stomatopora*. [*St. smithi* Phil. from Scarborough]. *Ann. Mag. Nat. Hist.*, ser. 6, vol. xv., March. Pp. 223-228.
- 54 GREGSON, W.—[Boulders at] Rokeby Park. *Naturalist*, Dec., p. 342.
- 55 GRESLEY, W. S.—On the Eastern Limits of the Yorkshire and Derbyshire or Midland Coalfield. (Abstract). *Quart. Journ. Geol. Soc.*, vol. li., p. 98.
- 56 HARKER, A.—Petrology for Students : an Introduction to the Study of Rocks under the Microscope. [Millepore Oolite from Wharram, p. 222]. Pp. viii., 306. 8vo. *Cambridge*. Ed. 2. Pp. viii., 334, 1897. Ed. 3, viii., 346, 1902. Ed. 4, pp. vi., 336, 1908.
- 57 HARRISON, W. J.—Notes on the Glacial Geology of the Yorkshire Coast (chiefly near Whitby). *Glac. Mag.*,

- vol. iii., pp. 67-77; Appendix: Glacial Bibliography, pp. 78-89.
- 58 HARRISON, W. J.—A Bibliography of Midland Glaciology [many Yorkshire items included]. *Proc. Birmingham Nat. Hist. and Phil. Soc.*, vol. ix., 89 pp.
- 59 HAWKESWORTH E.—[Boulders at] Saltburn. *Naturalist*, Dec., p. 343.
- 60 HICK, T.—On *Koloxylon hookeri* Will. and *Lyginodendron oldhamium* Will. [Halifax]. *Mem. Proc. Manchester Lit. Phil. Soc.*, ser. 4, vol. ix., pp. 109-117.
- 61 ——— On the Structure of the Leaves of *Calamites*. [Halifax]. *Ibid.*, pp. 179-190.
- 62 HILL, E.—Observations on East Anglian Boulder Clay. *Geol. Mag.*, dec. iv., vol. ii., pp. 555-557.
- 63 HILL, W., and A. J. JUKES-BROWNE.—On the Occurrence of Radiolaria in Chalk. *Quart. Journ. Geol. Soc.*, vol. li., pp. 600-608; *Geol. Mag.*, dec. iv., vol. ii., p. 372.
- 64 HIND, W.—A Monograph of the Carbonicola, Anthracomya, and Naiadites. Pt. 2. [Wakefield, pp. 100, 133, 139; general section of Yorkshire Coal-Measures, p. 162]. Pp. 81-170; plates xii.-xx. *Monogr. Pal. Soc.*, vol. xlix. for the year 1895.
- 65 H[INDE], G. J.—[Review of] The Great Ice Age and its relation to the Antiquity of Man, by James Geikie. *Geol. Mag.*, Jan., pp. 29-38.
- 66 HINDE, K. A., and G. L. PEPLER.—[Fossils found at Coxwold and in the gravel pits at Fulford, York]. *Nat. Hist. Journ.*, Dec. 15th, p. 148.
- 67 HOLGATE, B.—[See W. L. Carter].
- 68 HOWORTH, H. H.—Mr. Deeley and Mr. Harker: 'Two Birds with One Stone.' [Supposed origin of Holderness Boulders]. *Geol. Mag.*, dec. iv., vol. ii., pp. 46-48.
- 69 ——— Ice or Water. Another Appeal to Induction from the Scholastic Methods of Modern Geology. 3 vols. 8vo. London. Vol. i., pp. lvi. 536; vol. ii., pp. viii., 498. Reviewed in *Geol. Mag.*, dec. v., vol. ii., pp. 277-280.
- 70 HUDLESTON, W. H.—A Monograph of the British Jurassic Gasteropoda. Pt. 1, No. 8. Gasteropoda of the Inferior Oolite. Pp. 391-444; plates xxxiii.-xl. *Monogr. Pal. Soc.*, vol. xlix., for the year 1895.

- 71 HUTCHINGS, W. M.—An Interesting Contact-Rock, with Notes on Contact-Metamorphism. [Falcon Clints, Teesdale]. *Geol. Mag.*, dec. iv., vol. ii., pp. 122-131, 163-169.
- 72 ——— [See C. A. McMahon].
- 73 JEFFS, O. W.—Sixth Report of the Committee . . . for the collection . . . of Photographs of Geological Interest. . . *Rep. Brit. Assoc.* for 1895, pp. 404, 414.
- 74 J[ENKINSON, S.].—Along the Cliffs from Hayburn Wyke to Robin Hood's Bay. *N. and E. Yorks. Sci. Notes*, Oct. pp. 37, 38.
- 75 JONES, T. R. and JAMES W. KIRBY.—Notes on the Palæozoic Bivalved Entomostraca, No. 32. Some Carboniferous Ostracoda from Yorkshire [from the Yoredale Rocks of Swaledale, Teesdale, Settle, etc.]. *Ann. Mag., Nat. Hist.*, ser. 6, vol. xvi., pp. 452-460.
- 76 JORDAN, J. B.—Home Department, Mines. List of the Plans of abandoned Mines deposited in the Home Office . . . . corrected to 31st December, 1894. *London*.
- 77 JUKES-BROWNE, A. J.—The Microscopic Structure of the Zones of the Chalk. *Proc. Yorks. Geol. Soc.*, vol. xii., pt. 5, pp. 385-395.
- 78 ——— [See W. Hill].
- 79 KAYSER, E.—Text Book of Comparative Geology: Translated by PHILIP LAKE. [Brief references to Yorkshire Geology]. Ed. 2. xii.+426 pp. *London*.
- 80 KENDALL, P. F.—Twenty-second Report . . . on Erratic Blocks. [Barnsley, Royston, Baldersby, Kirklington, and East Riding]. *Rep. Brit. Assoc.* for 1895, pp. 426-430.
- 81 ——— Twenty-third Report . . . on Erratic Blocks. [Todmorden, Mirfield, Sowerby, Rokeby Park, Baldersby, Saltburn, Burstwick, Melton, Bessingby, Holderness Coast]. *Ibid.*, pp. 430-436.
- 82 ——— Sub-aqueous Deposition of Boulder-clay. [Flamboro Head, p. 146].
- 83 ——— Geological Observations upon some Alpine Glaciers. [Compared with British phenomena]. *Glac. Mag.*, vol. ii., pp. 120-3, 127-132.
- 84 ——— [See W. L. Carter].
- 85 KIRKBY, JAMES W.—[See T. Rupert Jones].

- 86 LAKE, PHILIP.—[See E. Kayser].
- 87 LAMPLUGH, G. W.—Notes on the Coast between Bridlington and Filey. [Map of Speeton Cliffs, showing zones]. *Proc. Yorks. Geol. Soc.*, vol. xii., pt. 5, pp. 424-431.
- 88 LAW, ROBERT.—[Boulders at] Millwood. *Naturalist*, Dec., pp. 341-342.
- 89 LUPTON, A.—Some Notes on the Yorkshire Coalfield and its Eastwardly Extension. [Map from Leeds to Nottingham]. *Ibid.*, pp. 432-436.
- 90 MCMAHON, C. A. and W. MAYNARD HUTCHINGS.—Note on Pseudo-Spherulites [Whin Sill]. *Geol. Mag.*, June, pp. 257-259.
- 91 MADDOCK, H. E.—Fossil Zones of the Lower Chalk of the South Coasts [compared with those of Yorkshire]. *Trans. Hull Geol. Soc.*, vol. ii., pp. 20-23.
- 92 MARR, J. E.—[See E. J. Garwood].
- 93 MARTEL, E. A.—Speleology [Ingleborough]. *Report Sixth International Geol. Congress. London.* Pp. 6.
- 94 MEEK, ALEXANDER.—The Newcastle Museum of Natural History. *Nat. Science*, Aug., pp. 115-118.
- 95 MIDGLEY, W. W.—Foraminiferæ in the Mountain Limestone [from Skipton]. *Sci. Goss.*, n. s., vol. ii., p. 165.
- 96 MITCHELL, T. CARTER.—[Boulders at] Baldersby. *Naturalist*, Dec., pp. 342-3.
- 97 MORRIS, M.—[See A. E. Garrod].
- 98 MYRTLE, A. S.—Curative properties of the Harrogate Waters. [*Brit. Med. Assoc.*, Aug. 1895]. Also pp. 14. 8vo. *Harrogate*.
- 99 PARK, GODFREY RICHARD.—A History of the Ancient Borough of Hedon [brief references to topographical changes]. *Hull.* Pp. x.+315.
- 100 PENROSE, F.—[See A. E. Garrod].
- 101 PEPLER, G. L.—[See K. A. Hinde].
- 102 PIERCE, W. G.—Inaugural Address. [Water Supply of Yorkshire towns]. *Trans. Soc. Water-works Eng.*, for 1895, pp. 1-31.
- 103 PRESTWICH, JOSEPH.—On Certain Phenomena belonging to the Close of the last Geological Period and their bearing upon the Tradition of the Flood. *London*, pp. vii.+87.

- 104 READE, T. M.—British Geology in relation to Earth-Folding and Faulting. Presidential Address to the Liverpool Geological Society. *Geol. Mag.*, dec. iv., vol. ii., pp. 557-565.
- 105 SALTONSTALL, THOMAS.—[Boulders at] Luddenden Foot, Sowerby, etc. *Naturalist*, Dec., p. 342.
- 106 SCOTT, D. H.—Williamson's Researches on the Carboniferous Flora. *Sci. Progress*, vol. iv., pp. 253-270, Bibliography, pp. 270-272.
- 107 ——— [See W. C. Williamson].
- 108 SEELEY, H. G.—The Story of the Earth in Past Ages. [Brief references to Yorkshire]. *London*. Pp. 196.
- 109 SEWARD, A. C.—Notes on the Bunbury Collection of Fossil Plants, with a list of type specimens in the Cambridge Botanical Museum. [*Baiera gracilis*, pp. 194, 195]. *Proc. Cambridge Phil. Soc.*, vol. viii., pp. 188-199.
- 110 S[EWARD, A. C.].—William Crawford Williamson. Born November, 24th, 1816. Died June 23rd, 1895. [Obituary Notice]. *Nat. Science*, Aug., pp. 141-143.
- 111 SHEPPARD, T.—On the Occurrence of Scandinavian Boulders in England. [Criticises Sir H. H. Howorth's hypothesis that the Scandinavian boulders have been brought by ships]. *Glac. Mag.*, vol. iii., pp. 129-132 (with Table).
- 112 ——— On another Section in the So-called Interglacial gravels of Holderness. *Proc. Yorks. Geol. and Polyt. Soc.*, vol. xiii., pt. 1, pp. 1-14.
- 113 ——— [Boulders at] Burstwick. *Naturalist*, Dec., p. 343.
- 114 SIMPSON, W. —Notes on the Strata and Deposition of the Millstone Grit. *Proc. Yorks. Geol. Soc.*, vol. xii., pt. 5, pp. 407-420.
- 115 SPEIGHT, E. E.—Upper Wharfedale Exploration Committee. First Annual Report (1893). *Ibid.*, pp. 374-384.
- 116 SPENCER, J.—On the Geology of Calderdale. *Ibid.*, pp. 369-373.
- 117 STATHER, J. W., and others.—Report of the Boulder Committee. Boulders noted on the Holderness Coast between Withernsea and Hornsea, 1895. *Trans. Hull Geol. Soc.*, vol. ii., pp. 6-8.



- 118 STATHER, J. W.—[Boulders at] Melton and Bessingby. *Naturalist*, Dec., pp. 343-344.
- 119 ——— [See W. L. Carter].
- 120 TATE, T.—The Yorkshire Boulder Committee and its Ninth Year's Work. *Naturalist*, pp. 339-345.
- 121 ——— Yorkshire Naturalists at Knaresborough. [Geological Observations]. *Naturalist*, pp. 148, 149.
- 122 TIDDEMAN, R. H.—The Occurrence of Limestone Conglomerates on the North Side of the Craven Faults. *Proc. Yorks. Geol. Soc.*, vol. xii., pt. 5, pp. 437-440.
- 123 ——— [See W. L. Carter].
- 124 UPHAM, WARREN.—View of the Ice Age as Two Epochs, the Glacial and the Champlain. *Glac. Mag.*, Dec., pp. 113-122.
- 125 VAN CALKER, F. T. P.—[See under Calker, van].
- 126 VEITCH, W. Y.—Geological Notes of an Excursion made by the Field Club to Runswick Bay. *Proc. Cleveland Nat. Field Club*, pp. 12, 13.
- 127 WALTON, F. F.—Some New Sections in the Hessle Gravels. *Proc. Yorks. Geol. Soc.*, vol. xii., pt. 5, pp. 396-406. [Abstract in *Glac. Mag.*, vol. iii., p. 162].
- 128 ——— Additional Notes on the Hessle Gravels. *Trans. Hull Geol. Soc.*, vol. ii., pp. 16-18.
- 129 WILLIAMSON, W. C., and D. H. SCOTT.—Further Observations on the Organisation of the Fossil Plants of the Coal-Measures. Pt. 1. *Calamites*, *Calamostachys*, and *Sphenophyllum*. [Halifax]. *Phil. Trans.*, vol. clxxxv. B 2, pp. 863-958; *Journ. Roy. Mic. Soc.*, p. 457.
- 130 ——— Further Observations of the Organisation of the Fossil Plants of the Coal-Measures. Pt. 2. The Roots of *Calamites*. (Abstract). *Proc. Roy. Soc.*, vol. lvii., pp. 1-3; *Journ. Roy. Mic. Soc.* p. 338.
- 131 ——— Further Observations of the Fossil Plants of the Coal-Measures. Pt. 3. *Lyginodendron* and *Heterangium*. (Abstract). *Ibid.*, vol. viii., pp. 195-204.
- 132 ——— On the light thrown upon the Question of the Growth and Development of the Carboniferous Aborescent *Lepidodendra* by the Study of the Details of their Organisation. *Mem. Manch. Lit. and Phil. Soc.*, sec. 4, vol. ix., pp. 31 *et seq.*

- 133 WILLIAMSON, W. C., and D. H. SCOTT.—On *Lyginodendron* and *Heterangium*. *Ann. of Botany*, Sept., pp. 525-535.
- 134 WOODWARD, A. S.—Malton Naturalists' Society. Presidential Address. *N. E. Yorks. Sci. Notes*, vol. ii., No. 18, Nov., pp. 54-56.
- 135 ——— [See also 1889].
- 136 WRIGHT, J.—[Discovery of Foraminifera in Boulder Clay from Hull]. (Belfast Naturalists' Field Club). *Irish Nat.*, vol. iv., p. 24.

## 1896.

- 1 ANON.—Alexander Henry Green, M.A., F.R.S., F.G.S. Obituary Notice. *Geol. Mag.*, dec. iv., vol. iii., p. 480.
- 2 ——— On the Industrial Products of the Geological Formations. *Coll. Guard.*, vol. lxxi., p. 1124, 1171, 1204; vol. lxxii., pp. 18, 65, 112-114, 160.
- 3 ——— Yorkshire Naturalists' Union. Excursion to Bowland Forest. [Geological Notes]. *N. and E. Yorks. Sci. Notes (Malton Field Nat. Sci. Soc.)*, vol. ii., No. 2, pp. 111-113.
- 4 ——— Report of Field Meetings. [Hornsea, Aldborough, York, Leeds, Burdale, Acklam, Gristhorpe, Filey, Flamborough, Beverley, Walkington, Little Weighton, Ryehill, and Burstwick]. *Trans. Hull Geol. Soc.*, vol. iii., pp. 9-15.
- 5 ——— Report of the East Riding Boulder Committee, Sept. 1st, 1896. [Holderness Coast, North Ferriby, Redcar, Saltburn, Swanland, Skirlaugh, Atwick, and Hornsea]. *Trans. Hull Geol. Soc.*, vol. iii., pp. 6-9.
- 6 ——— Current Glacial Bibliography. *Geol. Mag.*, n. s., Dec., iv., vol. iii., Nos. 1-6; *Glac. Mag.*, vol. iv., pt. 1, June, pp. 42-45.
- 7 ——— Current Glacial Bibliography. *Proc. Yorks. Geol. and Polyt. Soc.*, n. s., vol. xiii., pt. 1; *Glac. Mag.*, vol. iv., pt. 2, Sept., pp. 93-94.
- 8 ——— Glacial Geology at the British Association. *Glac. Mag.*, vol. iv., pt. 2, Sept., pp. 78-87.
- 9 ——— Reviews. *Trans. of the Hull Geological Society*, vol. i., and vol. 2. *Glac. Mag.*, vol. iv., pt. 2, Sept., pp. 88-89.

- 10 ANON.—Geological Literature added to the Geological Society's Library during the year ended December 31st, 1895. pp. 157.
- 11 ——— General Geological Map of England and Wales. [Yorkshire etc. Sheet 5]. 4 miles to an inch. Geological Survey.
- 12 ATKINSON, J. B.—List of Mines in the United Kingdom of Great Britain and Ireland . . . for the year 1895. *London*. 1896.
- 13 ——— Mineral Statistics of the United Kingdom of Great Britain and Ireland . . . for the year 1895. *London*. 1896.
- 14 ——— Summaries of Statistics relating to the Mines and Quarries in the United Kingdom . . . for 1895. *London*. 1896.
- 15 ——— List of the Plans of Abandoned Mines deposited in the Home Office. *London*. 1876.
- 16 BACKHOUSE, J.—Upper Teesdale, past and present: A Handy Reference Book, with Eight Illustrations and a Map. [Geology, pp. 38, 57]. Pp. 87. 8vo. *London* and *Barnard Castle*. See also *Naturalist*, p. 366.
- 17 BAKER, FRANK.—The South Yorkshire Coalfield. *Proc. Cleveland Inst. Engineers*. 1896. pp. 105-114.
- 18 BALLORE, M. F. DE MONTESSUS DE.—Seismic Phenomena in the British Empire. *Quart. Journ. Geol. Soc.*, vol. 52, Nov., pp. 651-668.
- 19 BARNES, J.—[See W. F. Holroyd].
- 20 BATHER, F. A.—Zones in the Carboniferous. [Letter calling attention to the necessity of noting the exact horizon of fossils]. *Geol. Mag.*, dec. iv., vol. iii., p. 46.
- 21 BLASHILL, T.—Sutton in Holderness. The Manor, The Berewic, and the Village Community [brief geological notes] Pp. 302. xv., 8vo. *Hull* and *London*. Ed. 2, 1900.
- 22 BONNEY, T. G.—Ice-Work Present and Past. [Yorkshire pp. 129-135, 155, 160, 167, 168, 182, 187-189]. Pp. x., 295. 8vo. *London*. Reviewed in *Geol. Mag.*, pp. 228-231.
- 23 BOYLE, J. R.—The Erosion of the Holderness Coast. *Trans. Hull Geol. Soc.*, vol. iii., pp. 16, 17.

- 24 BRADSHAW, C.—Ripple-marked Sandstone at Grimesthorpe, Sheffield. [Middle Coal Measures]. *Naturalist*, pp. 319, 320.
- 25 BRIERLEY, H.—The Yorkshire Gypsey-Springs. [Wold Newton]. *Nature*, vol. liii., p. 177.
- 26 ——— A Yorkshire Aerolite [which fell at Wold Newton in 1795]. *Ibid.*, p. 230.
- 27 BROWN, G. H.—On Foot round Settle. [Geological notes]. Pp. 246. 8vo. *Settle*. (New edition of older work but rewritten).
- 28 BRUCE-LOW, R.—Report on an Outbreak of Enteric Fever at Helmsley in the Helmsley Rural District North Riding of Yorkshire. [Contains meteorological report from Malton]. (No. 98). Pp. 20. *Local Government Board Report*. Fol. London.
- 29 BURRELL, B. A.—Analysis of the Water from the Dropping Well at Knaresborough in Yorkshire. *Journ. Chem. Soc.*, vol. lxi., pp. 536-539.
- 30 BURTON, F. M.—The Past History of the Trent. *Trans. Hull Geol. Soc.*, vol. ii., pp. 15, 16.
- 31 ——— The Story of Lincoln Gap [brief references to Yorkshire]. *Linc. Notes and Queries*, Oct. and Jan., 1897, pp. 15.
- 32 CARTER, W. L.—Yorkshire Naturalists at Hackfall and Tanfield. [Gypsum near Ripon]. *Naturalist*, p. 196.
- 33 CASH, W.—William Crawford Williamson, LL.D., F.R.S. Obituary. *Naturalist*, pp. 25-33.
- 34 COKE, G. E.—Boring below the Blackshale Coal-Seam at Apperknowle, near Sheffield. *Trans. Fed. Inst. Min. Eng.*, vol. x., pp. 483-488, Discussion, pp. 488-491.
- 35 COLE, E. M.—St. Austin's Stone. [Drewton Dale]. *Trans. Hull. Geol. Soc.*, vol. iii., pp. 24, 25.
- 36 CONWENTZ, H.—On English Amber and Amber generally. [Yorkshire, p. 102]. *Nat. Sci.*, vol. ix., pp. 99-106.
- 37 COOKE, J. H.—A Section in the Lower Oolites of Scarborough. [Cornbrash and Estuarine Series]. *Naturalist*, pp. 289-292.
- 38 CRICK, G. C.—On *Goniatites evolutus* Phillips, and *Nautilus tetragonius* Phillips; with a list of the Species belonging

- to the genus *Subclymenia*. *Geol. Mag.*, dec. iv., vol. iii., pp. 413-419.
- 39 DICKENSON, J.—River Valleys. [Tees, Derwent, ~~Humber~~, and tributaries, pp. 152, 153]. *Trans. Manchester Geol. Soc.*, vol. xxiv., pp. 137-163.
- 40 ——— The Geological Formations traversed by the principal rivers of England. (From Manchester Geol. Soc.). *Coll. Guard.*, vol. lxxii., pp. 173, 174.
- 41 ——— A brief abstract of the science of geology, especially in relation to the formation of river valleys. *Ibid.*, p. 212.
- 42 DUNSTON, G.—The Eastern Extension of the Midland Coalfield and the Exploration at Southcar. *Trans. Fed. Inst. Eng.*, vol. xii., pp. 515-522. Discussion, pp. 522-524; *Trans. Midl. Inst. Min. Eng.*, vol. xiv., pp. 245-252, Discussion, pp. 252-254.
- 43 DURNFORD, H. ST. JOHN.—Notes on the sinking of the No. 1 Pit at the Acton Hall Colliery, with Special Reference to the Thinning Out of the Silkstone and Beeston Coal-seams. *Trans. Fed. Inst. Min. Engineers*, vol. x., pp. 444 *et seq.*
- 44 FOSTER, C. E. LE NEVE.—Second Annual General Report upon the Mining Industry of the United Kingdom . . . for the year 1895. *London*. 1896.
- 45 FOX-STRANGWAYS, C.—Glacial Phenomena near York. *Proc. Yorks. Geol. Soc.*, vol. xiii., pt. 1, for 1895, pp. 15-20; *Glac. Mag.*, vol. iv., pt. 2, 1896, p. 94.
- 46 GALLOWAY, R. L.—Annals of Coalmining and the Coal Trade. *Coll. Guard.*, vol. lxxi., pp. 967, 1013, 1059, 1105, 1155, 1201; vol. lxxii., pp. 15, 61, 111, 157, 207, 258, 303, 349, 394, 440, 502, 535, 581, 642, 675, 722, 819, 867, 918, 961, 1009, 1059, 1107, 1153, 1201.
- 47 GARWOOD, E. J.—Report of the Committee . . . appointed to study the Life-zones in the British Carboniferous Rocks. [Preliminary Report]. *Rep. Brit. Assoc.* for 1896, pp. 415-416; *Geol. Mag.*, dec. iv., vol. iv., pp. 556, 557. [See also 1898].
- 49 ——— [See J. E. Marr].
- 50 GEIKIE, A.—The Latest Volcanoes of the British Isles. [The Yorkshire dyke, p. 182]. Presidential Address. *Trans. Glasgow Geol. Soc.*, vol. x., pp. 179-197.

- .51 GREGORY, J. W.—A Revision of the British Jurassic Bryozoa. Pt. 3. [*Berenicea scobinula*, Mich., Cornbrash, Yorkshire]. *Ann. Mag. Nat. Hist.*, ser. 6, vol. xvii., pp. 41-49, 151-155, 194-201, 287-295.
- .52 ——— Catalogue of the Fossil Bryozoa in the Department of Geology, British Museum. Jurassic Bryozoa. [Yorkshire specimens]. Pp. 239. 8vo. London.
- .53 GRENSTED, F. F.—A Contribution to the Dynamical Theory of the Craven Highlands. *Proc. Liverpool Geol. Soc.*, vol. vii., pt. 4, pp. 377-383.
- .54 GRESLEY, W. S.—The Yorkshire and Nottinghamshire Coalfield: Geological Suggestions relative to its Eastward Extension beneath the Permian and Secondary Strata into Lincolnshire. *Trans. Fed. Inst. Min. Eng.*, vol. xi., pp. 143-150, Discussion, pp. 150-155.
- .55 HARRISON, W. J.—Notes on the Glacial Geology of the Yorkshire Coast (chiefly near Whitby). *Glac. Mag.*, vol. iii., pp. 67-89.
- .56 HARKER, ALFRED.—The Classification of Igneous Rocks. *Science Progress*, vol. iv., pp. 469 *et seq.*
- .57 ——— The Natural History of Igneous Rocks. I.—Their Geographical and Chronological Distribution. *Science Progress*, n. s., vol. i., pp. 12 *et seq.*
- .58 HARTLEY, W. N., and H. RAMAGE.—On the Occurrence of the Element Gallium in the Clay-Ironstone of the Cleveland District of Yorkshire. *Proc. Roy. Soc.*, vol. lx., pp. 35-37, 394-407.
- .59 HICK, T.—On *Rachiopteris cylindrica* Will. [Lower Coal-Measures, Halifax]. *Mem. Proc. Manchester Lit. Phil. Soc.*, vol. xli. (ser. 5, vol. i.), pp. 1-14. Reprinted as No. 2 of *Notes from the Manchester Museum*.
- .60 ——— On some recent Advances in British Palæobotany. *Proc. Yorks. Geol. Soc.*, for 1895; vol. xiii., pt. 1, pp. 43-57.
- .61 HILL, W.—Heights of Chalk. *Geol. Mag.*, p. 142.
- .62 HIND, W.—A Monograph of the Carbonicola, Anthracomya, and Naiadites, pp. 171-182; plate xxi. Index. *Monogr. Pal. Soc.*, vol. 1.
- .63 ——— A Monograph of the British Carboniferous Lamelli-branchiata. Pt. 1. Introduction, Bibliography, etc.,

- pp. 1-80 ; plates i., ii., [Yorkshire species, pp. 69, 72, 75]. *Monogr. Pal. Soc.*, vol. 1.
- 64 HIND, W.—On Zonal Divisions of the Carboniferous System. *Geol. Mag.*, dec. iv., vol. iii., pp. 255-261.
- 65 HINDE, G. J.—Descriptions of new Fossils from the Carboniferous Limestone. I., On *Pemmatites constipatus* sp. nov., a Lithistid Sponge ; II., On *Palæacis humilis* sp. nov., a new Perforate Coral, with Remarks on the Genus ; III., On the Jaw-apparatus of an Annelid., *Eunicites reidia* sp. nov. *Quart. Journ. Geol. Soc.*, vol. lii., pp. 438-451 ; *Geol. Mag.*, dec. iv., vol. iii., pp. 281, 282 ; *Ann. Mag. Nat. Hist.*, ser. 6, vol. xvii., p. 467.
- 66 HOLROYD, W. F., and J. BARNES.—On the Rocks and Fossils of the Yoredale Series of the Marsden and Saddleworth Valleys. *Trans. Manchester Geol. Soc.*, vol. xxiv., pt. 5, pp. 70-91, Discussion, pp. 92-99.
- 67 ——— On the Stratified Clay of Strathearn and on the Imatra or 'Fairly Stones' found there. [Stalactitic Permian Limestone from Ripon, p. 110 ; Concretions forming in lacustrine clay of Filey, p. 112]. *Ibid.*, pt. 7, pp. 110-112.
- 68 HOWORTH, H. H.—The Destruction and Shattering of the Chalk of Eastern England. *Geol. Mag.*, dec. iv., vol. iii., pp. 58-66 ; *Glac. Mag.*, vol. iv., pt. 1, p. 43.
- 69 ——— Ice-Sheets and Scandinavian Boulders. *Glac. Mag.*, vol. iii., pt. 3, pp. 95-110.
- 70 ——— The Chalky and other Post-Tertiary Clays of Eastern England. *Geol. Mag.*, dec. iv., vol. iii., pp. 449-463.
- 71 ——— The so-called 'Middle Sands and Glacial Gravels of Eastern England. *Ibid.*, pp. 533-541.
- 72 ——— The Dislocation and Disintegration of the Chalk in Eastern England and Denmark. *Geol. Mag.*, pp. 289-309.
- 73 HUDLESTON, W. H.—A Monograph of the British Jurassic [Inferior Oolite] Gasteropoda. Pt. 1, No. 9. Pp. 445-514. Plates xli.-xliv. [Yorkshire, pp. 446, 451, 474, 475, 476, 482, 493-504]. *Monogr. Pal. Soc.*, vol. 1.
- 74 HUTCHINSON, W. H.—Prehistoric Man and Beast. [Kirkdale, p. 47 ; Devil's Arrows, p. 257]. Pp. 293. 8vo. London.

- 75 JOHNSTON, W. AND A. K.—Geological Map of the British Isles. (Scale 14 miles to an inch). *Edinburgh and London*.
- 76 JONES, T. R.—A Monograph of the Foraminifera of the Crag. Pt. 3. Pp. ix.-xii., 211-314. [Yorkshire, pp. 218, 224, 225]. *Monogr. Pal. Soc.*, vol. 1.
- 77 ——— The Fossil Phyllopoda of the Palæozoic Rocks. Twelfth Report of the Committee. *Rep. Brit. Assoc.* for 1895, pp. 416-426.
- 78 ——— and J. W. KIRKBY.—On Carboniferous Ostracoda from Ireland. [Yorkshire species noted]. *Trans. Roy. Dublin Soc.*, ser. 2, vol. vi., pp. 173-200.
- 79 JUDD, J. W.—The Student's Lyell. A Manual of Elementary Geology. [Many Yorkshire Notices]. Pp. 23 and 635. 8vo. *London*.
- 80 KENDALL, P. F.—First Report . . . on Erratic Blocks . . . [Yorkshire, pp. 370, 375]. *Rep. Brit. Assoc.* for 1896, pp. 366-377.
- 81 ——— On some Post-Pliocene Changes of Physical Geography in Yorkshire. [Diversion of the Nidd Valley]. *Ibid.*, pp. 801, 802; *Nature*, vol. liv., p. 586; *Glacialists' Mag.*, vol. iv., pt. 2, pp. 82-84.
- 82 ——— Notes on the Superficial Geology of the Vale of York. [Moraines of the Vale of York]. *Proc. Yorks. Geol. Soc.*, vol. xiii., pt. 1, pp. 89-91. Abstract. *Glacialists' Mag.*, vol. iv., pt. 2, p. 94.
- 83 KENNEY, A. H.—Erosion of Yorkshire Coast. *Rep. Brit. Assoc.* for 1895, pp. 381-382.
- 84 KIDSTON, R.—The Yorkshire Carboniferous Flora. Fifth Report on behalf of the Yorkshire Fossil Flora Committee for the year 1895. *Trans. Yorks. Nat. Union*, pt. 19, pp. 129-145.
- 85 ——— On the Fossil Flora of the Yorkshire Coalfield. *Trans. Roy. Soc., Edinburgh*, vol. xxxviii., pp. 203-223.
- 86 KIRKBY, J. W.—[See T. R. Jones].
- 87 LAMPLUGH, G. W.—Notes on the White Chalk of Yorkshire. Pts. 1 and 2. [Section at Ganstead, p. 88]. *Proc. Yorks. Geol. Soc.*, vol. xiii., pt. 1, for 1895, pp. 65-88.
- 88 ——— The Formation of Chalk Boulders. *Geol. Mag.*, dec. iv., vol. iii., pp. 45, 46.



- 89 LAMPLUGH, G. W.—On the Speeton Series in Yorkshire and Lincolnshire. *Quart. Journ. Geol. Soc.*, vol. lii., pp. 179-220.
- 90 LEYLAND, J.—Guide to the Yorkshire Coast. Pp. 46. 8vo. *Newcastle-upon-Tyne and London.*
- 91 MARR, J. E.—Presidential Address delivered to Section C. [British Association]. *Rep. Brit. Assoc.* for 1896, pp. 762-775; *Geol. Mag.*, pp. 464-479; *Nature*, vol. liv., pp. 494-500.
- 92 — The Graptolites. *Science Progress*, vol. v., pp. 360, *et seq.*
- 93 MARR, J. E. [? E. J. GARWOOD].—Report of Committee . . . . to study the Life Zones in the British Carboniferous Rocks. *Geol. Mag.*, pp. 519-520.
- 94 MARSHALL, J. W. D.—Notes on the British Jurassic Brachiododa. Pt. 1. [Suffield, p. 39]. *Proc. Bristol Nat. Sci.*, ser. 3, vol. viii., pp. 17-40.
- 95 MARTEL, E. A.—[Note] Sur le gouffre de Gaping-Ghyll (Angleterre). *Comptes Rendus, Acad. Sci. Paris*, vol. cxxii., pp. 51-53.
- 96 — Sons Terre (Huitième Campagne, 1895). Marble Arch, Irlande, et Gaping Ghyll, Angleterre. [Gaping Ghyll, pp. 192-209]. *Ann. du Club Alpine Fr.*, vol. xxii., for the year 1895.
- 97 — La descente de Gaping-Gyhl. *La Nature*, Jan. 25th, pp. 118-123, see also *Alpine Journal*, May, pp. 6.
- 98 MARTIN, EDWARD A.—The Story of a Piece of Coal. [Brief reference to Yorkshire]. Pp. 179.
- 99 MASLIN, A. J.—The Rise of Palæontology. [Refers to the Work of Phillips and Williamson in Yorkshire, p. 235]. *Sci. Goss.*, n. ser., vol. iii., pp. 142-144, 182-184, 234-236, 1896-7.
- 100 MONTESSUS DE BALLORE, F. DE.—[See under Ballore, de].
- 101 MUFF, H., and T. SHEPPARD.—Notes on the Glacial Geology of Robin Hood's Bay, Yorkshire. *Glac. Mag.*, vol. iv., pt. 2, pp. 47-60.
- 102 NEWTON, E. T.—[See G. Sharman].

- 103 O[LDFIELD], G.—Boring at Rillington. *N. and E. Yorks. Sci. Notes*, vol. ii., No. 2, p. 72.
- 104 PAVLOW, A. P.—On the Classification of the Strata between the Kimeridgian and the Aptian. *Quart. Journ. Geol. Soc.*, vol. lli., pp. 542-555.
- 105 P[AWSON], A. H.—Prof. Williamson's Autobiography. [Reviewed]. *Naturalist*, Oct., pp. 299-301.
- 106 RAMAGE, HUGH.—[See W. N. Hartey].
- 107 READE, T. MELLARD.—British Geology in Relation to Earth Folding and Faulting. (Presidential Address, Oct. 1895). *Proc. Liverpool Geol. Soc.*, vol. vii., pp. 363-377.
- 108 ——— The Present Aspects of Glacial Geology. *Geol. Mag.*, pp. 542-551.
- 109 R[EYNOLDS], R.—Biographical Notice of Richard Carter. *Proc. Yorks. Geol. Soc.*, vol. xiii., pt. 1, for 1895, pp. 92-94.
- 110 ROBINSON, J. F.—[Rhomb Porphyry at] Swine. *Trans. Hull Geol. Soc.*, vol. ii., p. 8.
- 111 ROSENBUSCH, H.—Mikroskopische Physiographie der Massigen Gesteine. Ed. 3. Pp. xix. + 1360. 8vo. *Stuttgart*.
- 112 ROWE, A. W.—The Preparation and Mounting of Chalk Fossils. [Flamborough Chalk, p. 305]. *Nat. Sci.*, vol. ix., pp. 303-311.
- 113 RUSSELL, W.—Erosion of the Yorkshire Coast. *Rep. Brit. Assoc.* for 1895, pp. 383-386.
- 114 SALVESEN, C. E.—Erosion of Yorkshire Coast. *Rep. Brit. Assoc.*, 1895, pp. 383.
- 115 SCOTT, D. H.—[See W. C. Williamson].
- 116 SEELEY, H. G.—On a Pyritous Concretion from the Lias of Whitby, which appears to show the external form of the body of embryos of a species of Plesiosaurus. *Ann. Rep. Yorks. Phil. Soc.*, for 1895, pp. 20-29.
- 117 SHARMAN, G., and E. T. NEWTON.—Note on some Cretaceous Fossils from the Drift of Moreseat, Aberdeen [compared with specimens from the Speeton Clay]. *Geol. Mag.*, dec. iv., vol. iii., pp. 247-254.

- 118 SHEPPARD, T.—Notes on the Occurrence of Boulders of Shap Granite, etc., in Lincolnshire. [Yorkshire notes]. *Naturalist*, pp. 333-339.
- 119 ——— On Another Section in the so-called Interglacial Gravels of Holderness. [Abstract] *Glac. Mag.*, vol. iv., pt. 2, pp. 93, 94.
- 120 ——— [See H. Muff].
- 121 ——— Bibliography. Papers referring to the Geology, etc., of the East Riding of Yorkshire, etc., published during the year 1895. *Trans. Hull Geol. Soc.*, vol. iii., pp. 25-27.
- 122 ——— Lincolnshire [and Yorkshire] Boulders. *Naturalist*, Dec., p. 373.
- 123 ——— [Boulders at] Burstwick. *Trans. Hull Geol. Soc.*, vol. ii., p. 8.
- 124 SIMPSON, W.—Some Physiographical and Geological Features of the Parish of Halifax. *Halifax Naturalist*, vol. i., pp. 2-6, 26-29.
- 125 ——— The Strata of the Parish of Halifax. *Ibid.*, pp. 69-77.
- 126 SPINK, J.—Lake Dwellings in the Vale of Pickering. *Proc. Yorks. Geol. Soc.*, vol. xiii., pt. 1, for 1895, pp. 21-24.
- 127 STATHER, J. W.—The Speeton Clay and some Correlative Beds (with Map and Diagram). *Trans. Hull Geol. Soc.*, vol. iii., pp. 17-24.
- 128 ——— [Boulders at] Bessingby and Melton. *Trans. Hull Geol. Soc.*, vol. ii., p. 8.
- 129 STEARS, J.—Particulars of Strata at Ganstead, in Holderness. *Proc. Yorks. Geol. Soc.*, vol. xiii., pt. 1, for 1895, p. 88.
- 130 STRANGWAYS, C. FOX.—Glacial Phenomena near York. [abstract]. *Glac. Mag.*, vol. iv., pt. 2, Sept., p. 94.
- 131 ——— Notes on the Coast between Redcar and Scarborough. *Excursion Programme for the Yorks. Geol. and Polyt. Soc.*, Pp. 4.
- 132 TATE, T.—The Malham Dry River Bed. [Summary of previous literature, etc.]. *Proc. Yorks. Geol. Soc.*, vol. xiii., pt. 1, for 1895, pp. 58-63.
- 133 THRESH, J. C.—Water and Water Supplies. 8vo. London. Ed. 3, 1901.
- 134 VEITCH, W. Y.—Geological Notes of an Excursion made by

- the [Cleveland Naturalists'] Field Club to Runswick Bay on June 1st, 1895; *Proc. Cleveland Nat. Field Club*, for 1895, pp. 12, 13.
- 135 WALTON, F. F.—Additional Notes on the Hessle Gravels. *Trans. Hull Geol. Soc.*, vol. ii., pp. 16-18.
- 136 ——— [Rhomb porphyry at] Hessle. *Ibid.*, p. 8.
- 137 WATTS, W. W.—Seventh Report of the Committee . . . for the Collection . . . of Photographs of Geological Interest. *Rep. Brit. Assoc.* for 1896, pp. 357-365.
- 138 WEBER, H., and F. P.—The Spas and Mineral Waters of Europe with notes on Balneo-Therapeutic management in various diseases and morbid conditions. [Harrogate, pp. 216-219]. 8vo. *London*.
- 139 WHEELER, W. H.—Littoral Drift: in its relation to the Outfall of Rivers, and to the Construction and Maintenance of Harbours on Sandy Coasts. [Yorkshire, pp. 10, 11, 15]. *Proc. Inst. Civ. Eng.*, vol. cxxv., pp. 2-32, Discussion and Correspondence, pp. 33-87.
- 140 WHITAKER, W.—Second Chronological List of Works on the Coast-Changes and Shore Deposits of England and Wales. *Rep. Brit. Assoc.* for 1895, pp. 388-392.
- 141 ——— Second Chronological List of Works referring to Underground Water, England and Wales. *Rep. Brit. Assoc.* for 1895, pp. 394-402.
- 142 WILLIAMSON, A. C.—[See W. C. Williamson].
- 143 WILLIAMSON, W. C., and D. H. SCOTT.—Further Observations on the Organization of the Fossil Plants of the Coal-Measures. Pt. 2. The Roots of Calamites. Pt. 3. Lyginodendron and Heterangium. *Phil. Trans.*, vol. clxxxvi. B 2, pp. 683-701, pp. 703-779.
- 144 ——— and A. C. WILLIAMSON.—Reminiscences of a Yorkshire Naturalist. Pp. xii., 228. 8vo. *London*.
- 145 WOODS, HENRY.—Elementary Palæontology, Invertebrate. *Cambridge*. 2nd Ed. Pp. 388.
- 146 WOODWARD, A. S.—On the Fossil Fishes of the Upper Lias of Whitby. Pt. 1. *Proc. Yorks. Geol. Soc.*, vol. xiii., pt. 1, for 1895, pp. 25-42.
- 147 WOODWARD, HORACE B.—Note on a Section at the North Cliff, Southwold [compares with Holderness peat]. *Geol. Mag.*, pp. 354-358.

1897.

- 1 ANON.—The Yorkshire Coalfield. [Foxholes, p. 16; Thornhill, p. 60; West Yorkshire Iron and Coal Co., p. 151; Park Mill, p. 193; Wombwell Main, p. 237; North Gawber, p. 284; Wooley, pp. 331, 332; Waleswood, pp. 374, 375; Wharnccliffe Woodmoor, pp. 464, 465]. *Coll. Guard.*, vol. lxxiv.
- 2 ——— Mineral Statistics of the United Kingdom . . . . for the year 1896. *London*. Home Office.
- 3 ——— Prehistoric Man and Beast, by H. N. HUTCHINSON. [Review of]. *Geol. Mag.*, pp. 77-80.
- 4 ——— Presents to the Museum [includes the Bedwell Collection of Fossils]. *Ann. Rep. Hull Lit. and Phil.* 1896-7. Pp. 10.
- 5 ——— Home Office. Mines and Quarries. Reports of H.M. Inspectors of Mines. Fol. *London*. [See also Hunt, R., 1855; Reports, 1884, 1895].
- 6 — Annual Report of the Geological Survey. . . . [Review of]. *Glac. Mag.*, Sept., pp. 66-85.
- 7 ——— (M. E.).—The Yorkshire Coalfield. [Morley Main, p. 945-949; Victoria and Park Farm, pp. 989, 990; Mirfield Moor, etc., pp. 1037, 1038; Newmarket, p. 1129; East Ardsley, pp. 1174, 1175]. *Coll. Guard.*, vol. lxxiii.
- 8 ATKINSON, J. B.—List of Plans of Abandoned Mines. Home Office. *London*. Pp. 1-91.
- 9 ——— Summaries of Statistics relating to the Mines and Quarries of the United Kingdom. . . Home Office. pp. 1-30.
- 10 ——— List of Quarries in the United Kingdom. . . . Home Office. Pp. 361.
- 11 ——— List of Mines, pp. 331. *London*.
- 12 ATKINSON, J. C.—Forty Years in a Moorland Parish. Ed. 3. [See under 1891]. Pp. xlv. + 471.
- 13 BARNES, J., and H. F. HOLROYD.—On the Occurrence of Lamellibranchiata, Gasteropoda, and Cephalopoda in the Millstone Grit of South Yorkshire. [List of fossils from Netherley on the flanks of Pule Hill]. *Trans. Manchester Geol. Soc.*, vol. xxv., pt. 7, pp. 184-191.
- 14 BELINFANTE, L. L.—Index to Volumes i.-l. [1845-1894] of the Quarterly Journal of the Geological Society. Parts

- 1 and 2, A-Z. *Quart. Journ. Geol. Soc.* Nos. 200A and 200B. Pp. 1-427.
- 15 BELINFANTE, L. L.—[not signed].—Geological Literature added to the Geological Society's Library during 1896. *London*.
- 16 BELL, D.—The Great Submergence Again: Clava, etc. Pt. 2. *Geol. Mag.*, dec. iv., vol. iv., pp. 63-68.
- 17 BELL, T.—Further Remarks on the Durham and Cleveland Salt Districts. [Middlesbrough]. *Trans. Manchester Geol. Soc.*, vol. xxv., pt. 2, pp. 69-77, Discussion, pp. 77-83.
- 18 BURRELL, B. A.—A History of the Dropping Well at Knaresborough with the Analysis of the Water. [History of the Harrogate Springs]. *Proc. Yorks. Geol. Soc.*, vol. xiii., pt. 2, pp. 135-143.
- 19 BURTON, F. M.—The Story of Lincoln Gap. [See 1896].
- 20 BURTON, J.—[Boulders at] Battye Ford. *Naturalist*, March, pp. 66-67.
- 21 CARTER, W. L.—Notes on the Geology of Malham and Settle. *Proc. Yorks. Geol. Soc.*, vol. xiii., pt. 2, pp. 241-247.
- 22 ——— Ancient British Volcanoes. [Upper Teesdale]. *Trans. Leeds Geol. Assoc.*, pt. 10, pp. 5-8.
- 23 ——— [Boulders at] Battieford. *Naturalist*, March, p. 67.
- 24 CASH, W.—The Flora of the Halifax Hard Bed. *Trans. Leeds Geol. Assoc.*, pt. 10, 1894-96, pp. 43, 44.
- 25 ——— In Memoriam. Thomas Hick, B.A., B.Sc. (Lond.), A.L.S. [List of Scientific Papers]. *Proc. Yorks. Geol. Soc.*, vol. xiii., pt. 2, pp. 234-239.
- 26 CHISHOLM, G. G.—On the Distribution of Towns and Villages in England. [Many Yorkshire Villages]. *Geog. Journ.*, vol. ix., pp. 76-87.
- 27 CLARK, J. E.—The late Earthquake. [Map of England showing shocks felt Dec. 17th, 1896]. *Hist. Nat. Journ. York*, vol. xxi., pp. 4-6.
- 28 COMBER, C. T. THORNTON.—[Boulders near] Pickering. *Naturalist*, Feb., pp. 60-61.
- 29 CORBETT, H. H. and PERCY F. KENDALL.—[Boulders at] Balby. *Naturalist*, March, pp. 68-69.

- 30 CORDEAUX, J.—President's Address to the Yorkshire Naturalists' Union : delivered at Leeds, November 26th, 1896. [Glacial Drift of Yorkshire]. *Naturalist*, pp. 193-208.
- 31 COSSMANN, M.—Revue Critique de Paleozoologie. *Paris*. No. 4. Oct. [Criticises papers by F. R. C. Reed, Wheelton Hind and J. Hawell].
- 32 COULTAS, F.—Geology of Deepcar and its Surrounding Hills. [Sections and Map]. *Trans. Fed. Inst. Min. Eng.*, vol. xiii., pp. 341-347 ; *Proc. Midl. Inst. Min. Eng.*, vol. xiv., pp. 453-458.
- 33 CRICK, G. C.—[See A. H. Foord].
- 34 CROFTS, W. H.—[Shap Granite at] Atwick. *Trans. Hull Geol. Soc.*, vol. iii., p. 8, and *Naturalist*, March, p. 74.
- 35 CUDWORTH, W.—[Boulders at] Bradford. *Naturalist*, March, p. 67.
- 36 DAVIS, PAUL and J. W. STATHER.—[Boulders at] Redcar and Saltburn. *Trans. Hull Geol. Soc.*, vol. iii., p. 7, and *Naturalist*, March, p. 73.
- 37 DE RANCE, C. E.—On the Permo-Carboniferous Boundary. [South Yorkshire, p. 228a]. *Trans. Manchester Geol. Soc.*, vol. xxv., pp. 207, 208, Discussion, pp. 229-235.
- 38 EVANS, JOHN.—The Ancient Stone Implements, Weapons and Ornaments of Great Britain. Ed. 2. [See under 1872]. Pp. xviii.+747.
- 39 FOORD, A. H., and G. C. CRICK.—Catalogue of the Fossil Cephalopoda in the British Museum. Pt. 3. Bactritidæ and part of the suborder Ammonoidea. [Yorkshire species]. 8vo. *London*, 1888-97. Pp. xxxiv.+304. Reviewed in *Geol. Mag.*, pp. 280-285.
- 40 FOSTER, C. E. LE NEVE.—Third Annual General Report upon the Mineral Industry of the United Kingdom . . . for 1896. Home Office.
- 41 FOX-STRANGWAYS, C.—Notes on the Coast between Redcar and Scarborough. *Proc. Yorks. Geol. Soc.*, vol. xiii., pt. 2, pp. 248-251.
- 42 GALLOWAY, R. L.—Annals of Coalmining and the Coal Trade. *Coll. Guard.*, vol. lxiii., pp. 15, 63, 109, 158, 201, 249, 297, 347, 393, 437, 488, 551, 598, 625, 671, 719, 761, 805, 853, 900.

- 43 GARWOOD, E. J.—Life Zones in the British Carboniferous Rocks. Report of the Committee . . . appointed to study the Life Zones in the British Carboniferous Rocks. *Geol. Mag.*, dec. iv., vol. iv., pp. 356, 357; *Rep. Brit. Assoc. for 1897*, pp. 296, 297.
- 44 GEIKIE, A.—The Ancient Volcanoes of Great Britain. [Yorkshire, vol. ii., pp. 4, 9, etc.]. Pp. xxiv., 477, xv., 492, 2 vols. 8vo. *London*.
- 45 ——— The Founders of Geology. [Wm. Smith's connection with Yorkshire. Pp. x., 297. Ed. 2. Pp. xi., 486. 1905. 8vo. *London*.
- 46 ——— Explanatory Notes to accompany a new Geological Map of England and Wales. Scale one inch to ten miles. Pp. 1-28, and map. 8vo. *Edinburgh*.
- 47 GEIKIE, JAMES.—The Last Great Baltic Glacier [brief references to Yorkshire]. *Journ. of Geology (Chicago)*. Vol. v., No. 4, pp. 325-339.
- 48 GOODCHILD, J. G.—An Outline of the Geological History of the Rocks around Edinburgh. [Comparative section of the Lower Carboniferous of Yorkshire]. *Proc. Geol. Assoc.*, vol. xv., August, pp. 117-143.
- 49 HARDCASTLE, C. D.—In Memoriam. Thomas Tate, F.G.S. *Naturalist*, 1897, pp. 367-370. See 1895.
- 50 HARKER, ALFRED.—Petrology for Students. Ed. 2. Pp. viii. + 334.
- 51 H[ARKER], A.—In Memoriam. Alexander Henry Green. *Naturalist*, pp. 111-114.
- 52 HARRISON, W. J.—A Text-book of Geology intended as an introduction to the study of the rocks and their contents. [Many references to Yorkshire geology]. New Ed. [nominally the 4th but practically a new work]. Pp. vii., 343. 8vo. *London*.
- 53 HARRISON, W. JEROME.—A Bibliography of Norfolk Glaciology, including the Cromer Cliffs. [Nearly 500 entries]. *Glac. Mag.*, March, pp. 141-185; June, pp. 1-33; Sept., pp. 49-62.
- 54 HARTLEY, W. N., and H. RAMAGE.—On the Occurrence of the Element Gallium in the Clay-Ironstone of the Cleveland District of Yorkshire. Determination of Gallium in



- Blast-furnace Iron from Middlesbrough. *Proc. Roy. Soc.*, vol. lx., pp. 393-407.
- 55 HARTLEY, W. N., and H. RAMAGE.—The Wide Dissemination of some of the Rarer Elements and the Mode of their Association in Common Ores and Minerals. [Cleveland iron-stone, etc.]. *Journ. Chem. Soc.*, vol. lxxi., pp. 533-547.
- 56 HAWELL, J.—Description of two new species of Gasteropoda from the Upper Lias of Yorkshire. [Saltwick Nab, near Whitby]. *Proc. Yorks. Geol. Soc.* vol. xiii., pt. 2, pp. 199, 200.
- 57 HAWKESWORTH, E.—[Boulders at] Saltburn. *Naturalist*, Feb., pp. 61-63.
- 58 HEMINGWAY, W.—[Boulders in] Dearne Valley. *Naturalist*, March, p. 67.
- 59 HICK, T.—On *Rachiopteris cylindrica* Will. [Halifax Coal-measures]. *Mem. Proc. Manchester Lit. Phil. Soc.*, vol. xli., pp. 1-14.
- 60 HIND, W.—On the Sub-divisions of the Carboniferous Series in Great Britain, and the True Position of the Beds Mapped as Yoredale Series. *Geol. Mag.*, dec. iv., vol. iv., pp. 91 and 159-169, 205-213; *Coll. Guard.*, lxxvi., pp. 709-710, 757, 758.
- 61 ——— A Monograph of the British Carboniferous Lamelli-branchiata. Pt. 2, pp. 81-208. [Many Yorkshire species] Plates iii.-xv. *Monogr. Pal. Soc.*, vol. li.
- 62 HOLGATE, B.—A Geological Study in the Horsforth Valley. [Evidence of glacial action]. *Trans. Leeds Geol. Assoc.*, pt. 10, pp. 49, 50.
- 63 HOLROYD, W. F.—[see J. Barnes].
- 64 HORNE, W.—Early races in Yorkshire. [Flint implements]. *Trans. Leeds Geol. Assoc.*, pt. 10, pp. 8-11.; *Trans. Hull Geol. Soc.*, vol. iii., p. 15.
- 65 HOWARTH, J. H.—[Borrowdale Andesite at] Bowland. *Naturalist*, March, p. 67.
- 66 HOWORTH, H. H.—On the Erratic Boulders and Foreign Stones in the Drift Deposits of Eastern England, and their Lessons. *Geol. Mag.*, dec. iv., vol. iv., pp. 123-130, 153-159.
- 67 ——— Water versus Ice as an Explanation of the Surface Beds of Eastern England. *Ibid.*, pp. 213-225.

- 68 HOWORTH, H. H.—The Geologically Recent Origin of the Surface Contour of Scandinavia and Finland and its Lessons. *Geol. Mag.*, dec. iv., vol. iv., pp. 355-361, 397-404.
- 69 HULL, E.—Sir Henry Howorth on the Glaciation of Norway. [Letter criticising his views respecting the former upheaval of Scandinavia]. *Ibid.*, pp. 453-457.
- 70 HUME, W. F.—The Cretaceous Strata of County Antrim. [Comparing the Sponges of the Spongiarian Zone with those from Danes' Dyke, p. 597]. *Quart. Journ. Geol. Soc.*, vol. liii., pp. 540-606.
- 71 JOWETT, A., and H. MUFF.—Two Striated Surfaces discovered on Excursions of the Bradford Scientific Association during the summer of 1897. [Windhill, Shipley, and between Midgley Wood and Baildon Green, Shipley]. *Glac. Mag.*, vol. v., pt. 3, p. 124.
- 72 JUDD, J. W.—William Smith's Manuscript Maps. [An account of Smith's Yorkshire information at that time]. *Geol. Mag.*, dec. iv., vol. iv., pp. 439-447.
- 73 KENDALL, P. F.—[Boulders at] York. *Naturalist*, March, pp. 69-70.
- 74 ——— [See H. H. Corbett].
- 75 K[ENDALL], P. F.—[Note on Mr. Cordeaux's Presidential Address]. *Glac. Mag.*, June, p. 48.
- 76 KIDSTON, R.—On the Fossil Flora of the Yorkshire Coal-field. (Second Paper). *Trans. Roy. Soc. Edinburgh*, vol. xxxix., pp. 33-62.
- 77 ——— Note on the Occurrence of *Palæoxyris* Brongniart in Yorkshire. *Naturalist*, Dec., p. 370.
- 78 LAMPLUGH, G. W.—Notes on the White Chalk of Yorkshire. Pt. 3. The Geology of Flamborough Head, with Notes on the Yorkshire Wolds. *Proc. Yorks. Geol. Soc.*, vol. xiii., pt. 2, pp. 171-191.
- 79 ——— Shelly Glacial Deposits [in the Isle of Man and Yorkshire Coast]. *Nature*, vol. lvi., p. 10.
- 80 LONDON, J.—Underground Water Channels. Instances from the older gravels of the Rea Valley at Saltley. [Refers to West Yorkshire potholes]. *Journ. Birmingham N. H. Phil. Soc.*, vol. ii., No. 7, 83-86.
- 81 LAW, R.—[Boulders at] Hawks Clough . . . Mytholmroyd, etc. *Naturalist*, Feb. and March, pp. 64-66.

- 82 LEES, F. A.—In Memoriam. Thomas Hick, B.A., B.Sc., A.L.S. *Naturalist*, pp. 81-84.
- 83 LOFTHOUSE, J. H.—[Boulders at] Harrogate. *Naturalist*, March, p. 68.
- 84 MANSON, R. T.—Notes on Glacial Striæ at Barton and Fawcett Quarries, at Holwick Head, North Yorkshire, and at Bolam, in South Durham. [On Carboniferous Limestone]. *Glac. Mag.*, Dec., vol. v., pt. 3, pp. 120-123.
- 85 ——— The Geology of the Tees Valley. [Outlined for the Darlington and Teesdale Naturalists' Field Club, 1896-7]. Pp. 9. 8vo. *Darlington*.
- 86 ——— Zig-Zag Ramblings of a Naturalist. Revised Edition. Part 1, pp. 1-56. *Darlington*.
- 87 MARION, J.—The Jurassic Wealden (Tithonian) of England. [Neocomian of Speeton, p. 150]. *Science*, n. s., vol. v., pp. 149-152.
- 88 MARSHALL, J. W. D.—Notes on the British Jurassic Brachipoda. Pt. 2. [North East Yorkshire]. *Proc. Bristol Nat. Soc.*, vol. viii., pt. 2, pp. 233, 247, 248.
- 89 MARTEL, E. A.—Irlande et Cavernes Anglaises. Pp. 403. 8vo. *Paris*.
- 90 ——— British Caves and Speleology. [Caves of Yorkshire, Gaping Ghyll, p. 509]. *Journ. Geog. Soc.*, vol. x., pp. 500-511.
- 91 ——— British Caves and Speleology [Ingleborough]. *Geog. Journ.*, November, 12 pp.
- 92 ——— Bibliographie Spéléologique, 1895-1897. *Mémoires de la Soc. Spéléologie*, No. 11, Nov., pp. 1-70.
- 93 MASLIN, ARTHUR J.—The Rise of Patæontology. *Sci. Goss.*, pp. 234-236.
- 94 MELLO, J. M.—Syllabus of a course of Six Lectures on Geology (with special reference to the District of Settle). *Manchester*.
- 95 MIAL, L. C.—In Memoriam. Professor A. H. Green, M.A., F.R.S., F.G.S. *Proc. Yorks. Geol. Soc.*, vol. xiii., pt. 2, pp. 232, 233.
- 96 MILNE, JOHN.—Cretaceous Fossils in Aberdeenshire. [Compares with Speeton]. *Rep. Brit. Assoc. for 1897*, pp. 333-342.

- 97 MITCHELL, D. J.—The Greensand Fossils from Drift-Beds at Morseat, Cruden, E. Aberdeenshire, with Exhibition of Specimens Collected. [Compared with the fauna of the Speeton Clay]. *Trans. Edinburgh Geol. Soc.*, vol. vii., pp. 277-285. [See Sharman and Newton, 1896].
- 98 MORTIMER, J. R.—Killing Pits. [Goathland Moor]. *Proc. Yorks. Geol. Soc.*, vol. xiii., pt. 2, pp. 144-149.
- 99 ——— On the Origin of some Lines of Small Pits on Allerston, and Ebberston Moors, near Scamridge Dykes, in the neighbourhood of Scarborough. *Ibid.*, pp. 150-154.
- 100 MUFF, H.—[See T. Sheppard].
- 101 MUFF, H. B.—[See A. Jowett].
- 102 NEWTON, E. T. and J. J. H. TEALL.—Notes on a Collection of Rocks and Fossils from Franz Josef Land. [Compares fossils with those from Yorkshire Oolites]. *Quart. Journ. Geol. Soc.*, vol. 53, Dec., pp. 477-519.
- 103 NICHOLSON, J.—[Boulders at] Hornsea. *Naturalist*, March, p. 74, and *Trans. Hull Geol. Soc.*, vol. iii., pp. 8-9.
- 104 PARRISH, W. S.—[Boulders at] Swanland. *Naturalist*, March, pp. 73-74, and *Trans. Hull Geol. Soc.*, vol. iii., pp. 7-8.
- 105 RAMAGE, H.—[See W. N. Hartley].
- 106 SALTONSTALL, T.—[Boulders at] Mytholmroyd. *Naturalist*, March, p. 60.
- 107 SEWARD, A. C.—Palæobotany and Evolution. [Yorkshire specimens]. *Sci. Progress*, vol. vi. (n. s., vol. i.), pp. 108-118.
- 108 ——— The Glossopteris Flora. An Extinct Flora of a Southern Hemisphere Continent. [*Sagenopteris philipsii*, p. 179]. *Sci. Progress*, vol. vi., pp. 178-201.
- 109 SHEPPARD, T.—Notes on *Elephas antiquus* and other remains from the gravels at Elloughton, near Brough, East Yorkshire. *Proc. Yorks. Geol. Soc.*, vol. xiii., pt. 2, pp. 221-231.
- 110 ——— Hull Scientific and Field Naturalists' Club. Reports of Meetings. *Sci. Goss.*, vol. iii., p. 317; vol. iv., pp. 29, 61, 93, 185.
- 111 ——— Hull Naturalists at Spurn. *Sci. Goss.*, vol. iv., pp. 124, 125.

- 112 SHEPPARD, T.—Notes on the Ice-borne Blocks of Shap Granite, etc., found in Lincolnshire. [Yorkshire Notes]. *Linc. Notes and Queries*, April and July. Pp. 9.
- 113 ——— Lincolnshire [and Yorkshire] erratics. *Naturalist*, p. 228.
- 114 ——— Bibliography: Papers relating to the Geology of the East of Yorkshire and North Lincolnshire . . . 1895. *Trans. Hull Geol. Soc.*, vol. iii., pp. 25-27.
- 115 ——— The Extinct Animals of Holderness. [Abstract]. *Science Gossip*, July, p. 61.
- 116 ——— and H. MUFF.—[Boulders at] Robin Hood's Bay. *Naturalist*, Feb., pp. 63-64.
- 117 SIMPSON, W.—The Millstone Grit. [Of West Yorkshire]. *Trans. Leeds Geol. Assoc.*, pt. 10, pp. 23-26.
- 118 SPEIGHT, H.—Romantic Richmondshire, being a complete account of the History, Antiquities, and Scenery of the Picturesque Valleys of the Swale and Yore. [Geology, pp. 35, 92, 100, 162, 164, 246, 267, 272, 355, 358, 400, 458]. Pp. 521. 4to. London.
- 119 STATHER, J. W.—Notes on the Drifts of the Humber Gap. *Proc. Yorks. Geol. Soc.*, vol. xiii., pt. 2, pp. 210-220.
- 120 ——— [Boulders at] North Ferriby. [373 erratics examined]. *Trans. Hull Geol. Soc.*, vol. iii., p. 7, and *Naturalist*, March, p. 72.
- 121 ——— [not signed].—Report of the East Riding Boulder Committee. [Records of thousands of boulders on the Yorkshire coast]. *Trans. Hull Geol. Soc.*, vol. iii., pp. 6-7 (and table), and *Naturalist*, March, pp. 70, 74.
- 122 ——— [See Paul Davis].
- 123 SUTCLIFFE, R.—Notes on the Yorkshire Coalfield. *Trans. Manchester Geol. Soc.*, vol. xxv., pp. 246-253, Discussion, pp. 254, 255.
- 124 TATE, T.—The Yorkshire Boulder Committee and its Tenth Year's Work. [North East Yorkshire, Vale of Pickering, Holderness, West Riding, Bradford, Harrogate, Doncaster, York, etc.]. *Naturalist*, Feb. and March, pp. 59-74.
- 125 TEALL, J. J. H.—[See E. T. Newton].
- 126 TURNER, J. HORSFALL.—Ancient Bingley; or Bingley, its History and Scenery. *Bingley*. Pp. 312.

- 127 WALTON, F. F.—The Lias of Yorkshire. (Abstract). *Trans. Leeds Geol. Assoc.*, pt. 10, pp. 44, 45.
- 128 ——— [Boulders at] Coniston, Skirlaugh and Preston. *Trans. Hull Geol. Soc.*, vol. iii., p. 8, and *Naturalist*, March, p. 74.
- 129 WATTS, W.—Earthquake Tremors. [Dec. 17th, 1896, on the Pennine Chain]. *Proc. Manchester Geol. Soc.*, vol. xxv., pp. 164, 165.
- 130 WATTS, W. W.—British Geological Photographs. [Flam-borough Head, etc.]. *Geol. Mag.*, dec. iv., vol. iv., pp. 31-37, 62, 109, 110.
- 131 WHITAKER, W.—Some Yorkshire Well Sections. [West Riding and Middlesbrough]. *Proc. Yorks. Geol. Soc.* vol. xiii., pt. 2, pp. 192-198.
- 132 WHITEHEAD, HENRY.—[Borrowdale Volcanic Ash at] Blackstone Edge. *Naturalist*, March, p. 66.
- 133 WOOD, W.—In Subterranean Caves. [Ingleborough]. *Gent. Mag.*, vol. cclxxxii., pp. 303-309.
- 134 WOODWARD, A. S.—On the Fossil Fishes of the Upper Lias of Whitby. Pt. 2. *Proc. Yorks. Geol. Soc.*, vol. xiii., pt. 2, pp. 155-170.
- 135 WOODWARD, H.—A Guide to the Fossil Invertebrates and Plants in the Department of Geology and Palæontology in the British Museum (Natural History). Pt. 1. Mollusca to Bryozoa. Pp. iv., 64. Pt. 2. Insecta to Plants, etc., Pp. ix., 65-98. 8vo. London. Another edition, 1907.

1898.

- 1 ANON.—The Glacial Contortions near Scalby (description of a photograph). *Trans. Hull Geol. Soc.*, vol. iv., p. 5.
- 2 ——— Humber Mud. [Discussion before the Hull Naturalists' Field Club]. *Nat. Sci.*, vol. xiii., pp. 82, 83.
- 3 ——— Glacial Drift in the Midlands. Account of C. E. De Rance's paper before the North Staffordshire Field Club. [Notices the Trent Valley]. *Coll. Guard.*, vol. lxxvi., p. 793.
- 4 ——— (M. E.).—The Yorkshire Coalfield. [Nunnery Colliery, pp. 58, 59 ; Hickleton Main, p. 108 ; Cadeby Main, pp. 153, 154 ; Barrow, pp. 198, 199 ; Wath Main, p. 244 ;

- Monckton Main, 286, 287 ; Rotherham Main, pp. 422, 423 ; Wharnccliffe Silkstone, pp. 560]. *Coll. Guard.*, vol. lxxvi.
- 5 ANON.—La Descente de Rowten-Pot (Yorkshire). *Spelunca*, vol. iv., pp. 31-39. [Plans by S. W. Cuttriss].
  - 6 ——— Geology in Hull [review of vols. 1-3. *Trans. Hull Geol. Soc.*]. *Naturalist*, Oct., p. 300.
  - 7 ——— Summary of Progress of Geological Survey for 1897 [review of]. *Geol. Mag.*, July, pp. 306-318, and Aug., pp. 358-366.
  - 8 ——— [Signed "K."].—Fossil Plants for Students of Botany and Geology. By A. C. SEWARD [reviewed]. *Natural Science*, Oct., pp. 273-276.
  - 9 ——— [Signed "Sigma"].—On the Trail of the Elephant in Yorkshire [Holderness: An exaggerated report]. *Sheffield Telegraph*, April 11th.
  - 10 ANDERSON, TEMPEST.—[Shap Granite] near Grosmont. *Naturalist*, Dec., p. 354.
  - 11 ATKINSON, J. B.—Tables relating to the Output of Coal and other minerals . . . during 1897. *Home Office*, pp. 1-3.
  - 12 ——— List of Mines in the United Kingdom . . . for the year 1897. *London. Home Office*, pp. 1-349.
  - 13 ——— General Report and Statistics for 1897, Mines and Quarries. *London. Home Office*, pp. 1-9.
  - 14 ——— List of plans of the Abandoned Mines. . . corrected to Dec. 31st, 1897. *London. Home Office*, pp. 1-98.
  - 15 BEST, G.—Walks around Darlington and Neighbourhood, including Weardale, Teesdale, Swaledale, and Wensleydale, etc. [No date]. Pp. 12.
  - 16 BLAKE, J. F.—On Aggregate Deposits, and their relations to Zones [Speeton]. *Geol. Mag.*, Nov., pp. 481-488.
  - 17 BONNEY, T. G.—The Story of Our Planet. Ed. 2. [See 1893].
  - 18 BOGG, E.—The Border Country, Lakeland, and Ribblesdale. [Yorkshire Caves, pp. 231-243]. *Leeds*.
  - 19 BULMAN, G. W.—Origin of Arctic Plants in Britain. *Sci. Goss.*, vol. v., pp. 2-5.
  - 20 BUNKER, T.—The Natural History of Goole Moor and the Immediate Vicinity. *Trans. Hull Sci. F. N. Club*, vol. i., pp. 1-9.

- 21 BURRELL, B. A.—The Composition of the spar occurring in Mother Shipton's Cave, Knaresborough. *Proc. Yorks. Geol. Soc.*, vol. xiii., pt. 3, pp. 284, 285.
- 22 C[ARRINGTON], J. T.—Geological Photographs. *Science Gossip*, March, p. 283.
- 23 C[ARTER], W. L.—In Memoriam. Thomas Tate, F.G.S. *Proc. Yorks. Geol. Soc.*, vol. xiii., pt. 3, pp. 350-352.
- 24 CARTER, W. L.—Secretary's Report, 1897 [to the Yorkshire Geological and Polytechnic Society; describes the excursions of the Society during 1897; Harrogate, Pateley Bridge, Scarborough, and Appleby]. *Proc. Yorks. Geol. Soc.*, vol. xiii., pt. 3, pp. 358-364; *Trans. Leeds Geol. Assoc.*, pt. 11, p. 33.
- 25 COLE, E. M.—Inroads of the Sea near Spurn. *Eastern Morning News*, May 17th.
- 26 COMBER, C. T. T.—Fossil Limpet at Pickering. [*Patella rugosa* from the Calcareous Grit]. *Naturalist*, p. 200.
- 27 CORBETT, H. H.—[Boulders at] Cusworth, Sprotborough, Balby and Doncaster. *Naturalist*, Dec., pp. 354-355.
- 28 CRICK, G. C.—List of the Types and figured Specimens of Fossil Cephalopoda in the British Museum (Natural History). Pp. 103. 8vo. *London*.
- 29 CROFTS, W. H.—Notes on the Post-Glacial Deposits of Hull and District. *Trans. Hull Geol. Soc.*, vol. iv., p. 36.
- 30 CUTTRISS, S. W.—Notes on the Caves of Yorkshire. [West Riding]. *Proc. Yorks. Geol. Soc.*, vol. xiii., pt. 3, pp. 311-324.
- 31 DAVIS, P.—The Configuration of Holderness. (Abstract). *Trans. Hull Geol. Soc.*, vol. iv., p. 23.
- 32 DAWKINS, BOYD.—On the Relation of Geology to Engineering. [Water in the Yorkshire Chalk, pp. 263-265]. *Proc. Inst. Civ. Eng.*, vol. cxxxiv., pp. 254-277.
- 33 DONALD, JANE.—Observations on the Genus *Aclisina*, De Koninck, with Description of British Species and of some other Carboniferous Gasteropoda. [Wensleydale, Settle, etc.]. *Quart. Journ. Geol. Soc.*, vol. liv., pp. 45-72.
- 34 DUNCOMBE, C.—Evidence of Lake Dwellings on the Banks of the Costa, near Pickering, North Riding of Yorkshire.



- Journ. Anthropol. Inst.*, vol. xxviii. (n. s., vol. i.), pp. 150-154; *Naturalist*, 1899, p. 112.
- 35 DURNFORD, H. ST. J.—Notes on the change in the Character of the Barnsley Coal-seam between Rotherham and Pontefract. *Trans. Fed. Inst. Min. Eng.*, vol. xiv., pp. 589-594; *Proc. Midl. Inst. Min. Eng.*, vol. xv., pp. 131-136.
- 36 ELSDEN, J. V.—Applied Geology. Pt. 1. Pp. 96. Pt. 2. 1899. Pp. 250. 8vo. London.
- 37 FAIRLEY, T.—On the Water Supplies of Yorkshire. [Analyses of water from Harrogate, Thirsk, Ripon, etc.]. *Journ. Fed. Inst. Brewing*, vol. iv., No. 5, pp. 393-405.
- 38 FARRAH, JOHN.—[Shap Granite at] Claro Hill. *Naturalist*, Dec., p. 356.
- 39 FOSTER, C. E. LE NEVE.—General Report (part iii) and Statistics relating to the Output and value of the metals raised in the United Kingdom . . . in 1897.
- 40 FOX-STRANGWAYS, C.—Filey Bay and Brigg. [Description of Photographs]. *Proc. Yorks. Geol. Soc.*, vol. xiii., pt. 3, pp. 338-345.
- 41 ——— Notes on the Coast Sections between Hayburn Wyke and Filey. *Ibid.*, pp. 356, 357.
- 42 GALLOWAY, R. L.—Annals of Coal Mining and the Coal Trade. The Invention of the Steam Engine and the origin of the Railway. [Yorkshire, pp. 5, 26, 33, 34, 59, 60, 76, 111-114, 184-188, 320-327, 377, 379, 473, 491, 503]. Pp. xii., 533. 8vo. London. The bulk of the subject matter appeared in the *Coll. Guard.*, for 1896, 1897. Second Series in 1904.
- 43 GARWOOD, E. J.—Life Zones in the British Carboniferous Rocks. [Eccup, near Leeds]. *Rep. Brit. Assoc.* for 1897, pp. 296-297.
- 44 ——— and J. W. GREGORY.—Contributions to the Glacial Geology of Spitzbergen. [Refers to Mr. Goodchild's work in North-west Yorkshire, p. 222]. *Quart. Journ. Geol. Soc.*, vol. liv., pp. 198-227.
- 45 GEIKIE, A.—Types of Scenery and their Influence on Literature. (The Romanes' Lecture, 1898). Pp. 59. 8vo. London. See Review in *Natural Science*, August, pp. 77-78.

- 46 GEIKIE, A.—A New Geological Map of England and Wales [10 miles to the inch]. *Edinburgh*.
- 47 ——— Summary of Progress of the Geological Survey for 1897. . . . 176 pp. Reviewed in *Geol. Mag.*, July, pp. 306-318, Aug., pp. 358-366.
- 48 GOODCHILD, J. G.—Desert Conditions in Britain. [Rotherham Rock, p. 95]. *Trans. Glasgow Geol. Soc.*, vol. xi., pt. 1, pp. 71-104. Another version of this paper is given in *Trans. Edinburgh Geol. Soc.*, vol. vii., pp. 203-222.
- 49 GREGORY, J. W.—[See E. J. Garwood].
- 50 GREGSON, W.—[Boulders at] Cotherstone and Whashton. *Naturalist*, Dec., p. 354.
- 51 GUNN, W.—Notes on the Correlation of the Lower Carboniferous Rocks of England and Scotland. [Comparative Sections]. *Geol. Mag.*, dec. iv., vol. v., pp. 342-349.
- 52 HARKER, A.—Norwegian *Rhomb-porphyr*ies in the Holderness Boulder-clays. *Proc. Yorks. Geol. Soc.*, vol. xiii., pt. 3, pp. 279-281.
- 53 ——— Petrological Research among Sedimentary Rocks [chiefly E. Yorkshire rocks]. *Trans. Hull. Geol. Soc.*, vol. iv., pp. 17-20.
- 54 HARRISON, W. J.—The Ancient Glaciers of the Midland Counties of England. [Refers to the North Sea Ice Sheet]. *Proc. Geol. Assoc.*, vol. xv., pp. 400-408.
- 55 ——— [See C. Lapworth].
- 56 HAWELL, J.—The Yorkshire Naturalists' Union at Staithes. [Geological notes, pp. 106, 110, 111]. *Naturalist*, pp. 105-111.
- 57 HERRIS, R. S.—Asteroidea and Ophiuroidea from the Capricornis and Jamesoni Zones of the Lias of Boulby, Huntcliff, Staithes and Robin Hood's Bay [exhibited]. *Proc. Geol. Assn.*, vol. xv., pt. 6, p. 238.
- 58 HEWSON, W.—Inroads of the Sea near Spurn. *Eastern Morning News*, May 17th.
- 59 HICKS, H.—The Anniversary Address of the President. On the Evidences of the Antiquity of Man furnished by Ossiferous Caverns in Glaciated Districts in Britain. [The Victoria Cave, Settle, pp. xcv.]. *Quart. Journ. Geol. Soc.*, vol. liv., pp. lxxviii.-cii.; *Nature*, vol. lvii., pp. 402, 403.

- 60 HIND, W.—A Monograph of the British Carboniferous Lamellibranchiata. Pt. 3. [Yorkshire, pp. 217, 225, 237, 240, 265]. Pp. 209-276; plates xvi.-xxv. *Monogr. Pal. Soc.*, vol. lii.
- 61 ——— Note on the Life Zones of the Carboniferous Deposits of Europe. *Geol. Mag.*, dec. iv., vol. v., pp. 61-69; *Coll. Guard.*, vol. lxxv., pp. 444, 445.
- 62 ——— On Mr. Gunn's Correlation of the Carboniferous Rocks of England and Scotland. *Geol. Mag.*, dec. iv., vol. v., pp. 506-508.
- 63 HOLGATE, B.—Some Points of Comparison between the Plants of the Present and those of the Coal-Measure Period. *Trans. Leeds Geol. Assoc.*, pt. 11, pp. 19, 20.
- 64 ——— Geology of the Meanwood Valley and the District to the North of it. *Ibid.*, pp. 35, 36.
- 65 HOWARTH, J. H.—Composition of Felspars. [Sections of boulders from Robin Hood's Bay]. *Ibid.*, pp. 14, 15.
- 66 ——— The Yorkshire Boulder Committee and its Eleventh Year's Work, 1896-97; *Naturalist*, pp. 353-356.
- 67 HUDLESTON, W. H.—In Memoriam. John Stanley Tute. [Reference to his geological work in the Ripon district]. *Proc. Yorks. Geol. Soc.*, vol. xiii., pt. 3, pp. 353-355.
- 68 HUTCHINGS, W. M.—The Contact-Rocks of the Great Whin Sill. *Geol. Mag.*, dec. iv., vol. v., pp. 69-82, 123-131.
- 69 JONES, T. R., and H. WOODWARD.—A Monograph of the British Palæozoic Phyllopoda. Pt. 3, pp. 125-176; plates xviii.-xxv. [*Chænocaris tenuistriata*, from Settle, p. 125; *Dithyrocaris insignis* from Eccup, pp. 126, 160, 161, 163]. *Monogr. Pal. Soc.*, vol. lii.
- 70 JUDD, J. W.—The Earliest Engraved Geological Maps of England and Wales. [Yorkshire, p. 103]. *Geol. Mag.*, dec. iv., vol. v., pp. 97-103.
- 71 JUKES-BROWNE, A. J., and J. MILNE.—On the Cretaceous Fossils found at Moreseat, Aberdeenshire. [Compared with those from Speeton]. *Geol. Mag.*, dec. iv., vol. v., pp. 21-32.
- 72 KENDALL, P. F.—Report of the Committee . . . Erratic Blocks . . . [Yorkshire, pp. 350, 351]. *Rep. Brit. Assoc. for 1897*, pp. 349-352; *Glacialists' Mag.*, vol. v., pt. 3, pp. 144, 145.

- 73 KENDALL, P. F.—The Rocks of Yorkshire as a Source of Water Supply. *Journ. San. Inst.*, vol. xviii., pt. 4, pp. 591-601.
- 74 ——— The Evidences of a Scandinavian Ice-Sheet. *Trans. Hull Geol. Soc.*, vol. iv., p. 20.
- 75 ——— [Norwegian Boulders at] Saltburn and Staithes. *Naturalist*, Dec., p. 356.
- 76 KIDSTON, R.—The Yorkshire Carboniferous Flora. Sixth Report on behalf of the Yorkshire Fossil Flora Committee for 1896. [Sections near Sheffield]. *Trans. Yorks. Nat. Union*, pt. 21, for 1895, pp. 147-176. Reviewed by E. A. MARTIN, *Sci. Goss.*, vol. iv., p. 357.
- 77 ——— On the Fossil Flora of the Yorkshire Coalfield. *Trans. Roy. Soc. Edin.*, vol. xxxix., pp. 33-62.
- 78 LAMPLUGH, G. W.—Some open questions in East Yorkshire Geology. *Trans. Hull Geol. Soc.*, vol. iv., pp. 24-36.
- 79 LAPWORTH, C.—Sketch of the Geology of the Birmingham District, with contributions by W. W. WATTS and W. JEROME HARRISON. *Proc. Geol. Assn.*, Aug., pp. 313-416.
- 80 L[APWORTH], C.—Alexander Henry Green. Obituary. *Proc. Roy. Soc.*, vol. lxii., pp. v.-ix.
- 81 LAW, R.—Sketch of the Geology of Shibden. *Halifax Naturalist*, vol. iii., No. 17, pp. 97-102.
- 82 MACDONALD, G.—How we get our Weather. [Ground torn up by waterspout at Langtoft]. *Harmsworth's Mag.*, July, vol. i., pp. 55-60.
- 83 MADDOCK, H. E.—Erratics on the Yorkshire and Lincolnshire Coast. *Naturalist*, Aug., p. 245.
- 84 MANSON, R. T.—Zigzag Ramblings of a Naturalist. [The Tees, pp. 154-179]. Pp. 212. 8vo. *Darlington*. Ed. 1, 1884.
- 85 MARR, J. E.—The Development of British Scenery. [Settle, etc.]. *Sci. Progress*, vol. vii. (n. s., vol. ii.), pp. 274-286.
- 86 ——— The Principles of Stratigraphical Geology. [Yorkshire referred to]. Pp. 304. 8vo. *Cambridge*.
- 87 [MARTIN, E. A.].—Yorkshire Carboniferous Flora. [Review of Sixth Report of the Fossil Flora Committee of the Yorkshire Naturalists' Union]. *Sci. Goss.*, vol. iv., p. 357.

- 88 MIALl, L. C.—A Yorkshire Moor. *Nature*, vol. lviii., pp. 377-380, 401-404.
- 89 MILNE, J.—[See A. J. Jukes-Browne].
- 90 PRATT, C. T.—[Boulder at] Noblethorpe. *Naturalist*, Dec., p. 353.
- 91 REECE, R. J.—Report on Fever Prevalence at Aldburgh in the Skirlaugh Rural District. Pp. 9. *Local Government Board Report*. (No. 128). Fol. London.
- 92 ROEBUCK, W. DENISON.—Bibliography: Papers and Records published with respect to . . . Land and Freshwater Mollusca, 1892-3]. Lacustrine deposits]. *Naturalist*, June, pp. 189-192, and July, pp. 193-199.
- 93 ——— Bibliography: Papers and Records published with respect to . . . Mammalia [peat deposits]. *Naturalist*, Feb., pp. 61-64; March, pp. 65-71.
- 94 ——— Romantic Richmondshire [review of]. *Naturalist*, Jan., pp. 29-32.
- 95 SALES, H.—Section in the Chalk at Willerby. *Trans. Hull Geol. Soc.*, vol. iv., pp. 21, 22.
- 96 SCOTT, D. H.—On the Structure and Affinities of Fossil Plants from the Palæozoic Rocks. II., On *Spencerites*, a new genus of Lycopodiaceous Cones from the Coal-Measures, found on the *Lepidodendron spenceri* of Williamson. *Phil. Trans.*, vol. clxxxix. B., pp. 83-166.
- 97 SEWARD, A. C.—Fossil Plants for Students of Botany and Geology. [Yorkshire, pp. 40-43, 55, 85, 218, 263, 270]. Vol. i., pp. xviii., 452. 8vo. Cambridge. Reviewed in *Nat. Sci.*, vol. xiii., pp. 273-276.
- 98 ——— On the Possible Identity of *Bennettites*, *Williamsonia*, and *Zamites gigas*. *Rep. Brit. Assoc. for 1897*, p. 663.
- 99 SHEPPARD, T.—The Hessle Chalk Quarries. Pp. 8. 8vo. London.
- 100 ——— The Origin and the Contents of the Gravels around Hull. *Trans. Hull Geol. Soc.*, vol. iv., p. 21.
- 101 ——— Notes on a Pair of Antlers of the Red Deer (*Cervus elaphus*), from the Peat at Hornsea. *Trans. Hull Sci. F. N. Club*, vol. i., pp. 21, 23.
- 102 ——— Origin of the Humber Mud. *Sci. Goss.*, vol. v., pp. 7-9.
- 103 ——— Traces of an Ancient Lake-Dwelling at Sand-le-Mere,

- near Withernsea, East Yorkshire. *Naturalist*, Oct., pp. 301-303.
- 104 SHEPPARD, T.—Remains of the Red Deer, from the Peat Bed at Withernsea. *Ibid.*, p. 304.
- 105 ——— Hull Scientific and Field Naturalists' Club. [Geological notes]. *Sci. Goss.*, vol. v., pp. 30, 95.
- 106 ——— The Mammoth [Yorkshire occurrences]. *Progress. Hull.* 2 pp.
- 107 ——— Snakestones [Whitby, etc., referred to]. *Ibid. Hull.* 3 pp.
- 108 ——— List of papers referring to the Geology, etc., of the East of Yorkshire . . . which have been published during 1896 and 1897. *Trans. Hull Geol. Soc.*, vol. iv., 4 pp.
- 109 ——— Bibliography: Papers and Records published with respect to the Natural History and Physical Features of the North of England, Geology and Palæontology, 1893. *Naturalist*, pp. 273-296.
- 110 ——— Hull Scientific and Field Nat. Club [Excursion to Atwick and Skipsea]. *Sci. Goss.*, Aug., p. 95.
- Hull Scientific and Field Nat. Club [meeting: red deer remains from the peat at Goole]. *Sci. Goss.* June, pp. 30-31.
- 111 ———[not signed]—Report of Excursions during 1896. [Bridlington, North Ferriby, Withernsea, Louth, Beverley, Selby, Driffield, Ilkley, Whitby, Staithes]. *Trans. Hull Geol. Soc.*, vol. iv., pp. 6-9.
- 112 T. SHEPPARD, and J. W. STATHER.—[not signed]—Report of Excursions during 1897. [Leeds, Appleby, Little Weighton, High Towthorpe, Sledmere, Barton, South Ferriby, Donnington, Hornsea, Scarborough, Hackness, Kelk, Gransmoor, Newbald, Sancton, Cliffe, Barrow, Drewton]. *Ibid.*, pp. 11-17.
- 113 SPEIGHT, H.—Chronicles and Stories of Old Bingley. A full account of the History, Antiquities, Natural Productions, Scenery, Customs, and Folk-lore of the Ancient Town and Parish of Bingley, in the West Riding of Yorkshire. [Geology, pp. 1-23, 282, 337, 390]. Pp. 417. 8vo. *London.* Ed. 4, 1905.
- 114 ——— Glacial Boulders in Swaledale. *Naturalist*, Oct., p. 307.

- 115 SPENCER, J.—The Halifax Coal Strata. [Details and list of fossils]. *Proc. Yorks. Geol. Soc.*, vol. xiii., pt. 3, pp. 302-310.
- 116 ——— Our local Fossils and where to find them. *Halifax Nat.* vol. iii., pp. 6-8.
- 117 STATHER, J. W.—A Glaciated Surface at Filey. *Proc. York. Geol. Soc.*, vol. xiii., pt. 3. Pp. 346-349.
- 118 ——— The Northern Escarpment of the Wolds. [Section at Flixton]. *Trans. Hull Geol. Soc.*, vol. iv., p. 22.
- 119 ——— Notes [on *Prostosphyraena ferox*, found at South Ferriby, etc.]. *Ibid.*, p. 23.
- 120 ——— [not signed]—Report of the East Riding Boulder Committee, 1895. [Holderness, South Ferriby, Scarborough]. *Trans. Hull Geol. Soc.*, vol. iv., p. 5.
- 121 ——— [Boulders in] Holderness and South [? North] Ferriby. *Naturalist*, Dec., p. 356.
- 122 ——— [See T. Sheppard].
- 123 TIDDEMAN, R. H.—Geology of Bowland Knotts [supplement to Yorks. Nat. Union Excursion Programme, 1 p.).
- 124 WALTON, F. F.—New Section in the Hessle Gravels. *Trans. Hull Geol. Soc.*, vol. iv., p. 10.
- 125 ——— Echinoderms of the Yorkshire Chalk. *Ibid.*, pp. 22, 23.
- 126 WATTS, W. W.—Geology for Beginners. [Yorkshire, pp. 63, 64, 135, 252, 254, 259, 279, 280, 302, 303, 306, 322, 323]. Pp. 352. 8vo. *London*.
- 127 ——— Eighth Report of the Committee . . . for the Collection . . . of Photographs of Geological Interest. *Rep. Brit. Assoc.* for 1897, pp. 298-322; Noted in *Sci. Goss.*, vol. iv., p. 283.
- 128 ——— [See C. Lapworth].
- 129 WEBER, H., and F. P.—The Mineral Waters and Health Resorts of Europe. . . . Being a revised and enlarged edition of 'The Spas and Mineral Waters of Europe.' [Harrogate, pp. 261-263]. 8vo. *London*. Ed. 3. Pp. 833, 1907.
- 130 WILSON, J. M.—Water Supplies from Wells. (Abstract). *Journ. San. Inst.* for 1897, vol. xviii., pp. 611, 612, Discussion, pp. 619-625.

- 131 WOODWARD, A. S.—Outlines of Vertebrate Palæontology for Students of Zoology. [Cambridge Nat. Sci. Manuals]. Pp. xxiv., 470. 8vo. *Cambridge*.
- 132 ——— The History of the Mammalia. [Pleistocene of Yorkshire referred to]. *Nat. Sci.*, vol. xii., pp. 328-336.
- 133 ——— On the Fossil Fishes of the Upper Lias of Whitby. Pt. 3. [*Lepidotus semiserratus* Ag. figured]. *Proc. Yorks. Geol. Soc.*, vol. xiii., pt. 3, pp. 325-337.
- 134 WOODWARD, H.—[See T. R. Jones].
- 135 WOODWARD, H. B.—Memoranda chiefly on the Drift Deposits in various parts of England and Wales; being extracts from the Notebooks and other MSS. of the late Sir Joseph Prestwich, M.A., D.C.L., F.R.S., etc. [Section near Leeds, pp. 416, 417]. *Geol. Mag.*, dec. iv., vol. v., pp. 404-417.

1899.

- 1 ANON.—Harrogate as a Health Resort. [Properties, etc., of the various waters]. Pp. 40. Published by the Corporation.
- 2 ——— The Geology of Upper Teesdale; a reply by Tom o' Cronkley.
- 3 ——— Yorkshire Flagstones. *Quarry*, vol. iv., pp. 161-166.
- 4 ——— Mines and Quarries: General Report and Statistics for 1898. Part 1 and Part 2, 113 pp. *London. Home Office*.
- 5 ——— Eminent Living Geologists. Henry H. Howell. *Geol. Mag.*, Oct., pp. 433-437.
- 6 ——— The Cadeby Main Colliery, near Doncaster, Yorkshire. *Trans. Inst. M. E.*, vol. xviii., pp. 311-312.
- 7 ——— (M. E.)—The Yorkshire Coalfield. Glass Houghton Colliery. *Coll. Guard.*, vol. lxxvii., pp. 1183, 1184.
- 8 ——— (M. E.)—The Yorkshire Coalfield. Carlton Main Colliery, pp. 14, 15; Grimethorpe, p. 64; Hoyland Silkstone, p. 106; Fitzwilliam Hemsworth, pp. 495, 496; *Coll. Guard.*, vol. lxxviii.
- 9 ——— [J. V. ELSDEN, and A. GREENWELL]. The Mineral Industry of the United Kingdom. [Introduction, pp. 282-289, 316-328]. *Quarry*, vol. iv., pp. 282-289, 316-328, 360-372, 402-410, 447-455, 477-483, 507-512. Continued in 1900.



- 10 ANON.—*Harrogate Illustrated*. Ed. 1. [See 1905].
- 11 ACKROYD, W.—Researches on Moorland Waters. I., Acidity. [Yorkshire, Lancashire, etc.]. *Journ. Chem. Soc. Trans.*, vol. lxxv., pp. 196-200. Abstract in *Halifax Nat.*, June, p. 36.
- 12 BATHER, F. A.—The Genera and Species of Blastoidia, with a list of the specimens in the British Museum. (Natural History). [Carboniferous Limestone, Settle]. Pp. x., 70. 8vo. *London*.
- 13 ——— A Record of, and Index to, the Literature of Echinodermata published during . . . 1898. [Reprint from *Zoological Record*], 73 pp.
- 14 [BELINFANTE, L. L. edited by]. Geological Literature added to the Geological Society's Library during . . . 1898. *London*.
- 15 ——— Abstracts of the Proceedings of the Geological Society. Nos. 697-713, 128 pp.
- 16 BRADY, W. E.—Preservation of the Royston Shap Granite Boulder. *Naturalist*, p. 124.
- 17 BREARE, W. H.—Illustrated Guide to Harrogate. [See 1891].
- 18 BREND, WILLIAM A.—The Story of Ice in the Present and Past [brief references to Yorkshire]. *London*. 228 pp.
- 19 BURTON, F. M.—Lincolnshire Coast Boulders. [Not derived from the Holderness Coast]. *Naturalist*, pp. 105-111, 325-329.
- 20 BURTON, J.—Eskdale Granite [at Balby]. *Naturalist*, Jan., p. 15.
- 21 CALVERT, E.—Gaping Ghyll Hole. *The Yorks. Ramblers' Club Journ.*, vol. i., No. 1, pp. 65-74.
- 22 CARRINGTON, J. T.—Meteorites. [Refers to the Meteorite which fell near Middlesbrough, p. 68]. *Sci. Goss.*, vol. v., pp. 65-69, 117, 118.
- 23 CARTER, W. L.—Excursions of Leeds Geol. Assn., in 1897. *Trans. Leeds. Geol. Assn.*, p. 33.
- 24 COLE, E. M.—The Distribution of Moorlands in the East of Yorkshire, as explained by the glacial History of the County. *Proc. Yorks. Geol. Soc.*, vol. xiii., pt. 4, pp. 400-401.

- 25 C[ORDEAUX], J.—In Memoriam, Henry Bendelack Hewetson. *Naturalist*, Aug., pp. 237-240.
- 26 COSSMANN, M.—A Monograph of the British Carboniferous Lamellibranchiata [review of]. *Revue Critique de Paléozoologie*, Oct., pp. 156-7.
- 27 CROFTS, W. H.—Post-Archæan (sic) Granite from Ängermanland [at Easington]. *Naturalist*, Jan., p. 15.
- 28 CROWTHER, H.—The Yorkshire Esk. *Trans. Leeds Geol.* pt. 11, pp. 8-10.
- 29 CUTTRISS, S. W.—Cave Hunting in Yorkshire. *Ibid.*, pp. 7, 8.
- 30 ——— Kingsdale and its Pot-Holes. *Ibid.*, pp. 33-35.
- 31 ——— Notes on the Caves of Yorkshire. Pt. 2. *Proc. Yorks. Geol. Soc.*, vol. xiii., pt. 4, pp. 433-443.
- 32 ——— The Caves and Pot-Holes of Yorkshire. *The Yorks. Ramblers' Club Journ.*, vol. i., No. 1, pp. 54-64.
- 33 DAKYNS, J. R.—The Limestone Knolls of Craven. [Letter criticising J. E. Marr's paper on the subject]. *Geol. Mag.*, dec. iv., vol. vi., p. 573.
- 34 ——— The Limestone Knolls below Skipton and Grassington in Craven. *Quart. Journ. Geol. Soc.*, vol. lv., pp. 359-361; *Nature*, vol. lx., p. 94; *Geol. Mag.*, dec. iv., vol. vi., p. 281.
- 35 DAVISON, C.—The Hereford Earthquake of 1896. [Extended to Yorkshire]. *Knowledge*, vol. xxii., pp. 121-124. Map.
- 36 DE RANCE, C. E.—Horizontal Thrusting in Joints, Mineral Veins and Faults in the North-west of England, etc. [Examples in North West Yorkshire]. *Trans. Inst. Min. Eng.*, vol. xvi., pp. 415-426.
- 37 ——— The Occurrence of Anhydrite in the North of England, etc. [Borings on the North Yorkshire and Durham Coasts, pp. 79-82]. *Trans. Inst. Min. Eng.*, vol. xvii., pp. 75-84.
- 38 DUNCOMBE, C.—[See 1898].
- 39 EDGECOMBE, W.—Why People go to Spas [Harrogate Waters]. *Nature*, Aug. 31st., vol. lx., pp. 416-420.
- 40 ELSDEN, J. V.—Applied Geology. Chapter xiii., Rocks used in the Arts and Manufactures, pp. 16-24. [Speeton Cement Beds, p. 17]. Chapter xiv., Engineering Geology,

- pp. 68-77. [Yorkshire Oolites, pp. 71, 75]. Chapter xv., Engineering Geology, cont. pp. 123-129. [Totley Tunnel, p. 126; Distribution of English Roadstones]. P. 128. Chapter xvi., Surface Features. *Quarry*, vol. iv. Also issued separately as Vol. 2, of "Applied Geology." *London*. 250 pp.
- 41 — [See Anon.].
- 42 FLETCHER, J. S.—A Picturesque History of Yorkshire. Being an Account of the History, Topography, and Antiquities of the Cities, Towns, and Villages of the County of York, founded on Personal Observations made during many journeys through the Three Ridings. [Geology, vol. iii., pp. 15-18, 293-295, etc.]. 3 vols., vol. i., 1899; vol. ii., 1900; vol. iii., 1901. 4to. *London*. Another Ed., 6 vols. 8vo. *London*, 1903-4.
- 43 FORSYTH, D.—A Review of the Ice Age Question. *Trans. Leeds Geol. Assoc.*, pt. 11, pp. 16-18.
- 44 FOSTER, C. E. LE NEVE.—Mines and Quarries: General Report and Statistics for 1898, pt. 3, Output. *London*. *Home Office*, pp. 117-266.
- 45 GARWOOD, E. J.—Life-Zones in the British Carboniferous Rocks. Report of the Committee . . . [alludes to the collection from Eccup, near Leeds]. *Rep. Brit. Assoc.*, for 1898, pp. 529, 530.
- 46 GRAINGE, W. D'OYLY.—Illustrated Handbook of the Baths and Springs of Harrogate. Pp. 102. Map and Illustrations. 8vo. *Harrogate*.
- 47 GREENWELL, A.—[See Anon.].
- 48 GREGORY, J. W.—Catalogue of the Fossil Bryozoa in the Department of Geology, British Museum. The Cretaceous Bryozoa. Vol. i. Pp. 457. 8vo. *London*.
- 49 GREGSON, W.—Shap Granite [at Mount Grace Priory]. *Naturalist*, Jan., p. 15.
- 50 GRUNDY, J. H.—Fossils from Millstone Grit. [Pule Hill, near Huddersfield]. *Sci. Goss.*, vol. v., p. 253.
- 51 GUNN, W.—Notes on the Correlation of the Lower Carboniferous Rocks of England and Scotland. [Comparative section of Wensleydale and Ingleborough]. *Trans. Edinburgh Geol. Soc.*, vol. vii., pp. 361-367.

- 52 HANDBY, J. W.—Cave Finds in Ribblesdale [at Moughton.]  
*Naturalist*, Jan., p. 32.
- 53 HARKER, A.—The Southward Movement of Beach-Material  
across the Humber Gap. *Naturalist*, May, pp. 155, 156.
- 54 ——— The Source of the Lincolnshire Coast Boulders.  
[Derived from the waste of the Holderness cliffs]. *Ibid.*,  
pp. 365, 366.
- 55 HIND, W.—On the Occurrence in British Carboniferous  
Rocks of the Devonian Genus *Palæoneilo*, with a Descrip-  
tion of a New Species, *P. carbonifera* [from the Carboni-  
ferous shale, near Slaidburn]. *Nature*, vol. lxi., p. 191 ;  
*Quart. Journ. Geol. Soc.*, vol. lvi., pp. 46-49, 1900 ; *Geol.*  
*Mag.*, dec. iv., vol. vii., p. 45, 1900.
- 56 ——— The Sub-divisions of the Carboniferous Series in  
Great Britain and some of their European Equivalents.  
[Comparative tables]. *Trans. Edinburgh Geol. Soc.*,  
vol. vii., pp. 332-360.
- 57 ——— An Address on the Correlation of the British and  
European Carboniferous Beds. *Trans. Manchester Geol.*  
*Soc.*, vol. xxvi., pt. 3, pp. 96-112, Discussion, pp. 112-118.
- 58 ——— A Monograph of the British Carboniferous Lamelli-  
branchiata ; Pt. 4, pp. 277-360 ; plates xxvi.-xxxix.  
[Yorkshire, pp. 293, 301, 303, 319, 323, 325, 330, 342, 349,  
356]. *Monogr. Pal. Soc.*, vol. liii.
- 59 HOWARTH, J. H.—The Underground Waters of Craven.  
Pt. 1. The Sources of the River. Pp. 12. Pamphlet  
issued to the members of the British Association at  
Dover, 1899.
- 60 ——— [See P. F. Kendall].
- 61 HOWORTH, H. H.—The Scandinavian Ice-sheet and the  
Baltic Glacier : a Sceptical Commentary. *Geol. Mag.*,  
dec. iv., vol. vi., pp. 4-13.
- 62 HOYLE, W. E.—The Manchester Museum, Owens College.  
General Guide.
- 63 JONES, T. R.—The Fossil Phyllopoda of the Palæozoic  
Rocks. Fourteenth Report of the Committee . . .  
[*Dithyrocaris* from Eccup]. *Rep. Brit. Assoc. for 1898*,  
pp. 519-521 ; *Geol. Mag.*, dec. iv., vol. vi., pp. 28-50.
- 64 ——— and H. WOODWARD.—A Monograph of the British  
Palæozoic Phyllopoda. Pt. 4. [*Chænocaris tenuistriata*

- from Settle, p. 18]. Pp. i.-xv., 175-211; plates xxvi.-xxxi. *Monog. Pal. Soc.*, vol. liii.
- 65 KENDALL, P. F.—Water Supply of the Goole Urban District. [Report on]. Pp. 7. 4to. *Leeds*. Privately printed.
- 66 ——— The Physical Geography of Yorkshire. *Trans. Leeds Geol. Assoc.*, pt. 11, pp. 20-22.
- 67 ——— Progress of Geology during the past year. [Glacial geology of East Yorkshire]. *Ibid.*, pp. 29, 30.
- 68 ——— The Norwegian Ice-Sheet. [Reviews the literature on the subject]. *Ibid.*, pp. 46-48.
- 69 ——— Erratic Blocks of the British Isles.—Report of the Committee . . . [Mostly East Yorkshire]. *Rep. Brit. Assoc.* for 1898, pp. 552-556.
- 70 ——— Black Flint [at Market Weighton]. *Naturalist*, Jan., p. 15.
- 71 ——— and J. H. HOWARTH.—The Yorkshire Boulder Committee and its Twelfth Year's Work, 1897-8; *Naturalist*, Jan., pp. 13-19.
- 72 LAPWORTH, C.—An Intermediate Text-Book of Geology. [Many references to Yorkshire]. Pp. xvii., 414. 8vo. *Edinburgh and London*.
- 73 LAW, R.—In Memoriam. James Spencer. *Proc. Yorks. Geol. Soc.*, vol. xiii., pt. 4, pp. 473-476.
- 74 LOMAX, J.—Recent Investigations on Plants of the Coal-Measures. [Yorkshire species]. *Trans. Manchester Geol. Soc.*, vol. xxvi., pt. 9, pp. 237-255, Discussion, pp. 255-262.
- 75 LOUIS, H.—Annals of Coal Mining and the Coal Trade by R. L. GALLOWAY [review of]. *Nature*, Feb. 9th, pp. 337-8.
- 76 MANSON, R. T.—Zig-zag Ramblings of a Naturalist. Parts 2 and 3. *Darlington*. 216 pp.
- 77 MARR, J. E.—Limestone-knolls in the Craven District of Yorkshire and elsewhere. *Quart. Journ. Geol. Soc.*, vol. lv., pp. 327-358; *Nature*, lx., p. 94; *Geol. Mag.*, dec. iv., vol. vi., pp. 279, 280.
- 78 MASLEN, A. J.—Some Recent Work on the Anatomy of Fossil Plants. [Yorkshire Lower Coal-Measure species]. *Nat. Sci.*, vol. xiv., pp. 364-374.

- 79 MIALL, L. C.—A Yorkshire Moor. [Brief geological notes]. *Proc. Roy. Inst.*, vol. xv., pp. 621-640.
- 80 MORTIMER, J. R.—The So-called British Habitations on Danby North Moor. *Proc. Yorks. Geol. Soc.*, vol. xiii., pt. 4, pp. 406-418.
- 81 ——— The Chalk Water Supply of Yorkshire. *Trans. Hull Field Nat. Club*, vol. i., No. 1, pp. 31-36. Reprinted with slight alterations from *Proc. Inst. Civ. Eng.*, vol. lv., 1879.
- 82 NICHOLS, H. B.—Water Supply from the Lower Greensand and constructional works connected therewith at Leighton Buzzard. [Removal of Iron Deposit from Water at Hornsea, p. 199]. *Brit. Assoc. Waterworks Eng.*, vol. iii., pp. 194-225.
- 83 PAUL, G.—Harrogate illustrated, with Notes on its Environs. [History and analyses of the waters]. (Mate's illustrated guides). 8vo. *Bournemouth*. Ed. 4, 1905.
- 84 PEACOCK, E. A. WOODRUFFE.—In Memoriam: John Cordeaux, J.P., F.R.G.S., M.B.O.U. *Naturalist*, Sept., pp. 280-284.
- 85 PLATNAUER, H. M.—The Work of the Ouse. [Estimating the amount of solid matter carried past York]. *Ann. Rep. Yorks. Phil. Soc.* for 1898, pp. 36-38; *Sci. Goss.*, vol. v., p. 7.
- 86 REED, F. R. C.—The Limestone Knolls of the Craven District. *Geol. Mag.*, dec. iv., vol. vi., pp. 527, 528.
- 87 ——— Woodwardian Museum Notes: A New Carboniferous Trilobite [*Phillipsia cracoensis* from the Pendleside Limestone]. *Ibid.*, pp. 241-245.
- 88 REID, C.—The Origin of the British Flora. [Yorkshire, pp. 50, 60, 75, 76, 77, 79, 87]. Pp. vi., 191. 8vo. *London*. Review by J. W. H. TRAIL. *Nat. Sci.*, vol. xv., p. 226. See also *Geol. Mag.*
- 89 REIMER, DIETRICH.—Carte Géologique internationale de l'Europe [Livraison 3].
- 90 RIPLEY, W. Z.—A Selected Bibliography of the Anthropology and Ethnology of Europe. *Boston (U.S.A.)*, 160 pp.
- 91 ROBINSON, J. F.—Basalt [boulder at Wassand]. *Naturalist*, Jan., p. 15.

- 92 ROBINSON, J. F.—Boulders at Willerby, near Hornsea  
[? Hull]. *Naturalist*, Jan., p. 15.
- 93 SEWARD, A. C.—On the Structure and Affinities of *Matonia pectinata*, R. Br., with Notes on the Geological History of the Matoniæ. [Yorkshire specimens noted]. *Phil. Trans.*, vol. cxc. B., pp. 171-209.
- 94 SHEPPARD, T.—Hull Scientific and Field Naturalists' Club.  
[Tusk of *Elephas primigenius* in boulder clay cliffs of Holderness]. *Sci. Goss.*, vol. v., p. 319.
- 95 ——— Work of the Ouse. *Ibid.*, vol. vi., pp. 24, 25. [See H. M. Platnauer].
- 96 ——— The Mortimer Museum; Suggested Purchase by the Hull Corporation. [Account of its contents]. Pp. 6. 8vo. *Hull*. Reprinted from the *Eastern Morning News*, Nov. 15th,
- 97 ——— Lake Dwellings at Pickering. *Naturalist*, p. 112.
- 98 ——— Skull of *Anas boschas* from the peat at Withernsea. *Trans. Hull Field Nat. Club*, vol. i., No. 2, p. 44.
- 99 ——— The Contents and Origin of the Gravels around Hull. *Ibid.*, pp. 45-51.
- 100 ——— [Boulders at] Atwick, Brough, Dimlington, Easington [etc.]. *Naturalist*, Jan, pp. 16-18.
- 101 ——— Bibliography: Papers and Records published with respect to the . . . north of England. Geology and Palæontology, 1894. *Naturalist*, March and April, pp. 81-103.
- 102 ——— Bibliography: Papers and Records published with respect to the . . . north of England. Geology and Palæontology, 1895. *Naturalist*, Oct. and Nov., pp. 305-325.
- 103 ——— Skull of an Elephant at Kilnsea [recent]. *Trans. Hull Field Nat. Club*, vol. i., No. 2, p. 54.
- 104 SIMPSON, W.—Record of a Boring made through the Grit Rocks of Halifax in 1898-9 [to a depth of 377 feet], with notes thereon. *Halifax Naturalist*, vol. iv., pp. 81-84.
- 105 SLADE, H. P.—Our Water Supply. [Hull]. *Trans. Hull Field Nat. Club*, vol. i., No. 2, pp. 29-31.
- 106 SMITH, F. W.—The Natural Waters of Harrogate, Chemically, Therapeutically, and Clinically considered, with reference to their application by drinking and bathing;

- by the light of fresh analysis, and by examination of the blood. [Geology, pp. 26-28 ; Chemical analysis by C. F. TOWNSEND, pp. 29-35]. Pp. 101, Map. 8vo. *London*. Review in *Nature*, May 11th, p. 28.
- 107 SPENCER, J.—The Yoredale and Millstone Grit Rocks of the Upper Calder Valley and their Fossils. *Proc. Yorks. Geol. Soc.*, vol. xiii., pt. 4, pp. 375-394.
- 108 SPENCER, L. J.—Supplementary List of British Minerals. *Geol. Mag.*, Feb., pp. 75-77.
- 109 STATHER, J. W.—[Boulders at Scalby Mills, Burniston, etc.]. *Naturalist*, Jan., pp. 18-19.
- 110 SAUVAGE, M. E.—[See E. D. Welburn].
- 111 ——— [See A. S. Woodward].
- 112 TOMES, R. F.—Observations on some British Cretaceous Madreporia, with the Description of two New Species. [Speeton Clay]. *Geol. Mag.*, dec. iv., vol. vi., pp. 298-307.
- 113 TOWNSEND, C. F.—[See F. W. Smith].
- 114 TRAIL, J. W. H.—[See Clement Reid].
- 115 VEITCH, W. Y.—Prehistoric Middlesbro' [brief geological notes]. *Proc. Cleveland Nat. Field Club*, 1896-98, pp. 5-12.
- 116 WATTS, W.—Excursion to Langsett, near Penistone, to view the new Waterworks of the Sheffield Corporation. *Trans. Manchester Geol. Soc.*, vol. xxvi., pt. 9, pp. 263-268.
- 117 WATTS, W. W.—Photographs of Geological Interest in the United Kingdom. Ninth Report of the Committee . . . *Rep. Brit. Assoc.* for 1898, pp. 530-546.
- 118 WELLBURN, E. D.—On some Fossil Fish found in the Millstone Grits of Yorkshire. [Eccup, Sowerby, and Wadsworth Moor]. *Proc. Yorks. Geol. Soc.*, vol. xiii., pt. 4, pp. 395-399.
- 119 ——— Fish Fauna of the Lower Coal Measures of the Halifax and Littleborough Districts. [Section of strata]. *Ibid.*, pp. 419-432 ; *Halifax Naturalist*, pp. 12-14, 47-50 ; Review by H. E. SAUVAGE in *Rev. Crit. de Pal.*, Jan. 1900 pp. 2, 3.
- 120 ——— On a New Species of *Lepracanthus* from the Yorkshire Coal-Measures [from the Better Bed Coal, Low Moor]. *Geol. Mag.*, dec. iv., vol. vi., pp. 451, 452 ; Review by H. E. SAUVAGE in *Rev. Crit. de Pal.*, July 1900, p. 115.



- 121 WELLBURN, E. D.—Geology : its Practical Application in Sanitation. [Geology of the West Riding noted]. *Journ. State Medicine*, vol. vii., pp. 777-786.
- 122 WILSON, J. W.—The Existence of Plant or Vegetable Life as noted in the Geological Formations especially as found in the British Isles. [Essay written for the Faculty of Central University Indianapolis, U.S.A.]. Pp. 35. *Hull*.
- 123 WOODS, H.—A Monograph of the Cretaceous Lamelli-branchiata of England. Pt. 1. [Speeton, pp. 2, 3, 13, 14, 18, 45]. Pp. 1-72 ; plates i.-xiv. *Monogr. Pal. Soc.*, vol. liii. for the year 1899.
- 124 WOODWARD, A. S.—On the Fossil Fishes of the Upper Lias of Whitby. Pt. 4. *Proc. Yorks. Geol. Soc.*, vol. xiii., pt. 4, pp. 455-472. Review by H. E. SAUVAGE in *Rev. Crit. de Pal.*, July 1900, pp. 110, 111.
- 125 WOODWARD, H.—[See T. R. Jones].

## 1900.

- 1 ANON.—The Court Guide and County Blue Book of the West Riding of Yorkshire. [Geology by B. HOLGATE, pp. 69-88]. 8vo. *London*.
- 2 ——— Cadeby Main Colliery [near Doncaster]. *Trans. Inst. Min. Eng.*, vol. xviii., pp. 311-312.
- 3 ——— Some Yorkshire Clay Pits. [Lower Coal-Measures near Leeds]. *Quarry*, vol. v., pp. 515-524.
- 4 ——— Catalogue of Temporary Museum . . . . Bradford [in connection with the British Assn. Meeting]. 8vo.
- 5 ——— Geology at the British Association. *Nature*, Oct. 11th pp. 387-388.
- 6 ——— Excursions [in connection with the British Association Meeting]. Pamphlets.
- 7 ——— British Association Bradford Meeting. [Handbook for . . . . Geological Excursions]. Pp. 6.
- 8 ——— Mines and Quarries : General Report and Statistics for 1899. Pt. 1. *Home Office*.
- 9 ——— The Palæontographical Society of London. Annual Volume (liii) for 1899 [review of]. *Geol. Mag.*, Feb., pp. 82-85.

- 10 ANON.—The Mortimer Museum at Driffield. *Naturalist*, May, p. 130.
- 11 ACKROYD, W.—On the Distribution of Chlorine in West Yorkshire. *Rep. Brit. Assoc.* for 1900, pp. 694, 695.
- 12 ——— On a limiting Standard of Acidity for Moorland Waters. *Ibid.*, pp. 695, 696.
- 13 ——— [See J. H. Howarth].
- 14 [APPERSON, G. L.].—Driffield, in Yorkshire [review of Catalogue of Museum]. *Antiquary*, Jan., 1901, p. 4.
- 15 AVEBURY, LORD.—Prehistoric Times as illustrated by Ancient Remains and the Manners and Customs of Modern Savages. 6th Ed.
- 16 BATHER, F. A.—A Record of, and Index to, the Literature of Echinodermata, published during 1899. [Reprint from *The Zoological Record*, pp. 4+101].
- 17 BEAN, J. A.—[See C. W. Fennell].
- 18 ——— [See J. H. Howarth].
- 19 BEAZELEY, A.—The Reclamation of Land from Tidal Waters. [Humber, pp. 2, 16, 230, 231, 255; Sunk Island, pp. 4, 16, 48, 97, 102, 243; Hornsea, p. 145]. Pp. xii., 314. 8vo. London. Reviewed in *Nature*, vol. lxxii., pp. 266, 267.
- 20 BECKWITH, B. S.—A Ten-Day's Driving and Walking Tour in the North-West Yorkshire Dales. [Brief geological notes]. Pp. 24. *Darlington*.
- 21 BELINFANTE, L. L.—[Edited by] Geological Literature added to the Geological Society's Library, during 1899. Pp. 176.
- 22 ——— Abstracts of the Proceedings of the Geological Society of London. Session 1899-1900. Pp. 124.
- 23 BERTRAND, C. E.—On the Structure of a Stem of a Ribbed *Sigillaria*. [Comparison with specimens from Halifax]. *Rep. Brit. Assoc.* for 1899, pp. 926, 927.
- 24 BLASHILL, THOMAS—Sutton-in Holderness: The Manor, the Berewic, and the Village Community [Geology, pp. 1-4, etc.]. 2nd Ed. Pp. xxiv.+302 pp.
- 25 BOND, J. W.—Records of Investigations in the Carboniferous Strata of the Leeds District. *Trans. Leeds Geol. Assoc.*, pt. 12, pp. 32-37.
- 26 BRANSON, F. W.—[See J. H. Howarth].

- 27 BROUGH, BENNETT H.—The Duration of the British Coalfields [review of, see E. Lozé]. *Nature*, June 7th, pp. 124-125.
- 28 BROWN, G. H.—The Ebbing and Flowing Well, Giggleswick, *Settle* [1900]. Pp. 32.
- 29 BURRELL, B. A.—[The Composition of some Malham Waters]. *Proc. Yorks. Geol. Soc.*, vol. xiv., pt. 1, pp. 45-48.
- 30 CALVERT, E.—Gaping Ghyll Hole, II. *The Yorks. Ramblers' Club Journ.*, vol. i., No. 2, pp. 123-133.
- 31 CARTER, W. L.—The Underground Waters of North-West Yorkshire. *Rep. Brit. Assoc. for 1900*, pp. 735-737; *Geol. Mag.*, dec. iv., vol. viii., pp. 75-77.
- 32 — Secretary's Report, 1899. [Summary of Excursions to Todmorden and East Yorkshire, etc.]. *Proc. Yorks. Geol. Soc.*, vol. xiv., pt. 1, pp. 99-108.
- 33 — [See J. H. Howarth].
- 34 COLE, E. M.—Moraine at Filey. *Naturalist*, March, p. 68.
- 35 CORBETT, H. H.—Dolerite [boulder at Cusworth]. *Naturalist*, March, p. 68.
- 36 COSSMANN, M. [reviews of].—‘On the Occurrence in British Carboniferous Rocks of the Devonian Genus *Palæoneilo*,’ and ‘A Monograph of the British Carboniferous Lamelli-branchiata, by W. HIND. *Revue Critique de Paléozoologie*, Oct., pp. 152, 155-156. [See W. Hind].
- 37 CROFTS, W. H.—The Upper Flintless Chalk at Beverley. [Flint at 176 feet]. *Trans. Hull Geol. Soc.*, vol. v., pt. 1, p. 27.
- 38 — Notes on Sections exhibited during the Excavation of the Alexandra Dock Extension, Hull. *Rep. Brit. Assoc. for 1900*, pp. 764, 765; *Proc. Yorks. Geol. Soc.*, vol. xiv., pt. 2, pp. 245-252.
- 39 — Post Archæ[a]n granite from Angermanland or Aland [at Easington]. *Trans. Hull Geol. Soc.*, vol. v., pt. 1., p. 5.
- 40 — [Rhomb-porphry] at Brantinghamthorpe. *Naturalist*, Dec., p. 356.
- 41 CRUMP, W. B.—[The Flora of Halifax]. Introduction. Chapter I. The Parish of Halifax. [Geological notes]. *Halifax Naturalist*, vol. v., pp. ix.-xvi.

- 42 CUTTRISS, S. W.—Cave-Hunting in Yorkshire. [Summary of a lecture]. *Halifax Naturalist*, vol. v., p. 18.
- 43 ——— The Caves and Pot-holes of Ingleborough and the District. *Rep. Brit. Assoc. for 1900*, pp. 734, 735; *Geol. Mag.*, dec. iv., vol. viii., pp. 77, 78, 1901.
- 44 DAKYNS, J. R.—Modern Denudation in North Wales. [Also Craven, etc.]. *Geol. Mag.*, dec. iv., vol. vii., pp. 18-20.
- 45 DWERRYHOUSE, A. R.—The New Red Series in England. [Quarries at Knaresborough]. *Trans. Leeds Geol. Assoc.*, pt. 12, pp. 28-31.
- 46 ——— The Movements of Underground Waters of Craven. First Report of the Committee . . . *Rep. Brit. Assoc. for 1900*, pp. 346-349; *Geol. Mag.*, dec. iv., vol. viii., pp. 72-75, 1901.
- 47 ELLET, F.—Long Kin Hole, West. *The Yorks. Ramblers' Club Journ.*, vol. i., No. 2, pp. 114-122.
- 48 ELSDEN, J. V.—[The Coalfields of] Yorkshire. *Coll. Guard*, vol. lxxix., pp. 112-120, 145-157, 197-207, 245-259, 309-322.
- 49 ELSDEN, J. V., and A. GREENWELL.—The Mineral Industry of the United Kingdom. VI., Yorkshire. I., Geological Descriptions. II, Mineral Products. [Map of Yorkshire, 1 inch to 13 miles; North-East Yorkshire, 1 inch to 4 miles]. *Quarry*, vol. v., pp. 112-120, 145-157, 197-207, 245-259, 309-322.
- 50 FENNELL, C. W.—[See J. H. Howarth].
- 51 FLETCHER, J. S.—A Picturesque History of Yorkshire, vol. ii. 4to. [See under 1899].
- 52 FOSTER, C. E. LE NEVE.—Output and Value of the Minerals raised in the United Kingdom in 1899. Summary in *Nature*, Nov. 15th, pp. 72-73.
- 53 GARWOOD, E. J.—Life-Zones in the British Carboniferous Rocks. Report of the Committee . . . *Rep. Brit. Assoc.*, for 1899, pp. 371-375.
- 54 GOWAN, J.—[See A. C. Seward].
- 55 GREENWELL, A.—[See J. V. Elsdon].
- 56 GREGORY, E. E.—The Later Yellow Boulder Clay of Aire-dale. *Brad. Sci. Journ.*, No. 18, Oct., pp. 187-189.

- 57 HARFIELD, E.—The Way of a Water Spout. [Denuding effects at Langtoft]. *Pearson's Mag.*, vol. x., pp. 531-535.
- 58 HAWELL, J.—A Peat Deposit at Stokesley. *Proc. Yorks. Geol. Soc.*, vol. xiv., pt. 1, pp. 49-51.
- 59 HAWKESWORTH, E.—Mammoth's Tooth at Staithes. *Naturalist*, Dec., p. 360.
- 60 HIND, W.—Life-zones in the British Carboniferous Rocks. Report of the Committee . . . *Rep. Brit. Assoc.* for 1900, pp. 340-342.
- 61 ——— On the Occurrence in British Carboniferous Rocks of the Devonian genus *Palæoneilo*, with a description of the New Species *P. carbonifera* [from Slaidburn]. *Quart. Journ. Geol. Soc.*, vol. lvi., pp. 46-49. Reviewed by M. COSSMANN; *Rev. Crit. de Pal.*, Oct., p. 152.
- 62 ——— A Monograph of the British Carboniferous Lamelli-branchiata. Pt. 5. [Yorkshire, pp. 367, 369, 392, 394, 397, 399, 405, 411, 455, 457, 459, 462, 470, 473]. Pp. 361-476; plates xl.-liv. *Monogr. Pal. Soc.*, vol. liv., for the year 1900.
- 63 HOLGATE, B.—Description of Coals of Bradford, Halifax, and Leeds. [Exhibited at the Bradford Meeting of the British Association]. Pp. 12.
- 64 ——— Geology of the West Riding of Yorkshire. In *The Court Guide and County Blue Book*. 8vo. London.
- 65 HOWARTH, J. H.—What We know of the Boulders of Yorkshire. *Trans. Leeds Geol. Assoc.*, pt. 12, pp. 5-8.
- 66 ——— Some Yorkshire Erratics and how to recognise them. *Ibid.*, p. 14.
- 67 ——— The Sources of the River Aire. [Yorks.]. *Ibid.*, pp. 24-25.
- 68 ——— The Underground Waters of North-West Yorkshire. Pt. 1. The Sources of the River Aire; I., Introduction by J. H. HOWARTH; II., Engineering Report by C. W. FENNELL and J. A. BEAN; III., Report of the Chemical Sub-committee by F. W. BRANSON and W. ACKROYD; IV., Report of the Geological Sub-Committee by P. F. KENDALL, J. H. HOWARTH, and W. L. CARTER; Appendix, Malham Tarn Flushes and Malham Cove, by P. F. KENDALL. *Proc. Yorks. Geol. Soc.*, vol. xiv., pt. 1, pp. 1-44.
- 69 ——— [See P. F. Kendall].

- 70 JOWETT, A., and H. B. MUFF.—A Preliminary Note on the Glaciation of the Keighley and Bradford District. *Rep. Brit. Assoc.* for 1900, pp. 756-759.
- 71 JUKES-BROWNE, A. J.—The Cretaceous Rocks of Britain. Vol. i. The Gault and Upper Greensand of England. [Red Chalk of Yorkshire, pp. 308-314, 325, 346, 410]. *Memoirs of the Geological Survey.* 8vo. London.
- 72 KENDALL, P. F.—On the Glacial Drainage of Yorkshire. [Moraines in the Vale of York]. *Rep. Brit. Assoc.* for 1899, pp. 743, 744.
- 73 ——— The Glacial Lakes and River Channels of Yorkshire. *Trans. Leeds Geol. Assoc.*, pt. 12, pp. 27, 28.
- 74 ——— Erratic Blocks of the British Isles. Report of the Committee . . . [Mostly East Yorkshire]. *Rep. Brit. Assoc.* for 1899, pp. 398-402.
- 75 ——— Erratic Blocks of the British Isles. Report of the Committee . . . [Mostly East Yorkshire]. *Ibid.*, for 1900, pp. 343-346.
- 76 ——— The Geological Conditions of Underground Water Supply. *Trans. Hull Geol. Soc.*, vol. v., pt. 1, pp. 13-18.
- 77 ——— [Boulders at] Robin Hood's Bay, etc. *Naturalist*, Dec., pp. 361-362.
- 78 ——— and J. H. HOWARTH.—The Yorkshire Boulder Committee and its Thirteenth Year's Work. *Naturalist*, Dec., pp. 355-360; ditto, Fourteenth Year's Work. [Mostly East Yorkshire]. *Naturalist*, Dec., pp. 361-364.
- 79 ——— ——— The Underground Waters of North-West Yorkshire. [See J. H. Howarth].
- 80 ——— and H. B. MUFF.—[Boulders at] Goathland. *Naturalist*, Dec., pp. 357-360.
- 81 KIDSTON, R.—Flora of the Coal-Measures. Joint Discussion Sections C. and K. *Rep. Brit. Assoc.* for 1900, p. 746; *Geol. Mag.*, dec. iv., vol. viii., p. 29, 1901.
- 82 KIDSTON, R.—Studies in Fossil Botany by D. H. SCOTT [review]. *Geol. Mag.*, Dec., pp. 567-571.
- 83 LAMPLUGH, G. W.—Note on the Age of the English Wealden Series. [Speaton Clay]. *Rep. Brit. Assoc.* for 1900, pp. 766, 767; *Geol. Mag.*, dec. iv., vol. vii., pp. 443-445.
- 84 LAW, ROBERT.—[See W. Simpson].

- 85 LOMAS, J.—On the Construction and Uses of Strike Maps [Illustrated by the country about Clitheroe]. *Rep. Brit. Assoc. for 1900*, pp. 742-743.
- 86 LOZÉ, E.—Les Charbons Britanniques et leur Epuisement. Recherches sur la puissance du Royaume Uni de Grande Bretagne et D'Irlande. [Geology, vol. i., p. 59; Yorkshire, pp. 284, etc. Map of Coalfield]. 2 vols. Pp. ix., 559 and vii., 562 to 1229. 8vo. *Paris*. Reviewed by B. H. BROUGH. *Nature*, vol. lxii., pp. 124, 125.
- 87 LUBBOCK, JOHN.—[See Lord Avebury].
- 88 MARR, J. E.—The Scientific Study of Scenery. [Numerous references to Yorkshire]. Pp. iv., 368. 8vo. *London*. Ed. 2. Pp. ix., 372. 8vo. *London*.
- 89 MARTIN, E. A.—A History of the Chalk. [Refers to the Speeton Clay, p. 235]. *Sci. Goss.*, vol. vi., pp. 12-14, 41-43, 78, 79, 115-117, 142, 143, 198, 199, 235, 306, 307, 336, 337, 368.
- 90 ——— Water-line in Chalk. *Ibid.*, p. 350.
- 91 MIDGLEY, W. W.—The Flora of the Carboniferous Rocks. [Illustrations of *Lepidodendron selaginoides*, *Rachiopteris laccati*, and section of Calcareous nodule]. *Journ. Manchester Geog. Soc.*, vol. xvi., pp. 202-206.
- 92 MONCKMAN, J.—Notes on some Recent Excavations in the Glacial Drift in Bradford. [Character of boulders along the valley]. *Rep. Brit. Assoc. for 1900*, pp. 754, 755.
- 93 ——— Short Geological Excursions [Bradford]. Handbook British Assn. Excursions. Pp. 6.
- 94 MORTIMER, J. R.—Notes on the History of Driffield Museum of Antiquities and Geological Specimens. *Proc. Yorks. Geol. Soc.*, vol. xiv., pt. 1, pp. 88-96; *Trans. Hull Field Nat. Club*, vol. i., pt. 3, pp. 135-141.
- 95 MUFF, H. B.—Mammoth's Tooth at Robin Hood's Bay. *Naturalist*, Oct., p. 291.
- 96 ——— [See A. Jowett].
- 97 ——— [See P. F. Kendall].
- 98 OLDFIELD, G.—Geology of the Pickering Vale. 14th *Ann. Rep. Malton Field Nat. and Sci. Soc.*, pp. 8-9.
- 99 PARRISH, W. S.—The [Hull Geological] Photographic Committee's Report. *Trans. Hull Geol. Soc.*, vol. v., pt. 1, p. 6.

- 100 PAUL, G.—Discovery of a very rare fossil in Harrogate. [*Pleuromytilus nodoso-carinatus* Römer]. *Harrogate Advertiser*, Jan. 6th, p. 5; *Yorkshire Weekly Post*, Jan 13th.
- 101 ROBINSON, J. F.—[Basalt Boulder at] Wassand. *Trans. Hull Geol. Soc.*, vol. v., pt. 1, p. 5.
- 102 ROEBUCK, W. D.—Yorkshire Naturalists' Union. Appendix. Reprint of Excursion Circulars. *Trans. Yorks. Nat. Union*, pt. 26.
- 103 SALES, H.—Willerby, near Hull. [Boulders from Clay resting on Chalk]. *Trans. Hull Geol. Soc.*, vol. v., pt. 1, p. 5.
- 104 SAUVAGE, H. E.—[Review of 'The Fish Fauna of the Lower Coal Measures of the Halifax and Littleborough Districts,' by E. D. WELLBURN]. *Revue Critique de Paléozoologie*, Jan., pp. 2-3.
- 105 ——— [Review of 'On the Fossil Fish of the Upper Lias of Whitby,' by A. SMITH WOODWARD]. *Ibid.*, July, pp. 110-111.
- 106 ——— [Review of 'On a new species of *Lepracanthus* from the Yorkshire Coal Measures,' by E. D. WELLBURN]. *Ibid.*, July, p. 115.
- 107 ——— [See E. D. Wellburn].
- 108 SCOTT, D. H.—Studies in Fossil Botany. [From material derived from the Yorkshire and Lancashire Coalfields]. Pp. xiii., 533. 8vo. *London*. Ed. 2. Pp. xxiv., 683. 1909. Reviewed in *Geol. Mag.*, dec. iv., vol. vii., pp. 567-571; *Nature*, vol. lxxiii., 53-54.
- 109 SEWARD, A. C.—Notes on the Binney Collection of Coal-Measure Plants. [Yorkshire specimens]. *Proc. Cambridge Phil. Soc.*, vol. x., pp. 137-174.
- 110 ——— The Jurassic Flora of East Yorkshire. [List of Yorkshire species]. *Rep. Brit. Assoc.* for 1900, pp. 765, 766; *Geol. Mag.*, dec. iv., vol. viii., pp. 36, 37, 1901.
- 111 ——— Catalogue of the Mesozoic Plants in the Department of Geology, British Museum (Natural History). The Jurassic Flora. Pt. 1. The Yorkshire Coast. Pp. xii., 341; plates i.-xxi. 8vo. *London*.
- 112 ——— Notes on Some Jurassic Plants in the Manchester Museum. [Mostly Yorkshire specimens]. *Mem. Proc. Manchester Lit. Phil. Soc.*, vol. xlv., No. 8, pp. 27; *Nature*, vol. lxi., pp. 358, 359.



- 113 SEWARD, A. C.—The Jurassic Flora of Britain. *Rep. Brit. Assn. for 1899*, p. 926.
- 114 S[EWARD], A. C.—The Norwegian North Polar Expedition, 1893-96. Scientific Results [compares Jurassic plants with E. Yorkshire species]. *Nature*, vol. lxii., June 14th, pp. 146-149.
- 115 ——— Botany at the British Association. *Nature*, Oct. 18th, pp. 610-614.
- 116 ——— and J. GOWAN.—The Maidenhair Tree (*Ginkgo biloba* L.). [Refers to the Yorkshire Jurassic beds, pp. 139-143]. *Ann. Bot.*, vol. xiv., pp. 109-154.
- 117 SHEPPARD, T.—Notes on some Remains of *Cryptocleidus* from the Kellaways Rock of East Yorkshire. [Mill Hill, near Brough]. *Geol. Mag.*, dec. iv., vol. vii., pp. 535-538 ; *Trans. Hull Geol. Soc.*, vol. v., pt. 1, pp. 23, 24 ; *Sci. Goss.*, vol. vii., p. 287.
- 118 ——— Tooth of *Oxyrhina macrorhiza* from the Red Chalk at Speeton. *Trans. Hull Field Nat. Club*, vol. i., pt. 3, p. 119.
- 119 ——— Local Archæological Notes. (a) Note on a Bronze Mould and a Hoard of Bronze Axes found at Hotham Carrs, East Yorkshire. (b) On a French Type of Bronze Axe found at Hull. (c) On a Roman Vase recently found in North Lincolnshire. [Geological notes]. *Ibid.*, pp. 120-126. [See also *Antiquary*, vol. xxxvi., pp. 120, 121, 246, 247].
- 120 ——— A Descriptive Catalogue of the Specimens in the Mortimer Museum of Archæology and Geology at Driffield. Pp. 82. 8vo. *London*.
- 121 ——— Prehistoric Man in Holderness. [Geology of the district. Erosion of the Coast]. *Antiquary*, vol. xxxvi., pp. 38-44, 80-87 ; *Trans. Hull. Field Nat. Club*, vol. i., pt. 3, pp. 71-89 ; *Journ. Assoc. Archit. Soc.*, 1900, pp. 1-19 ; Abstract in *Hull Lit. Club Mag.*, vol. ii., pt. 1, pp. 39-43.
- 122 ——— Bibliography, North of England. Geology and Palæontology, 1896. *Naturalist*, June, pp. 173-191.
- 123 ——— Saurian Remains in the Kellaways Rock, Brough, East Yorkshire. *Trans. Hull. Geol. Soc.*, vol. v., pt. 1, pp. 23-24.

- 124 SHEPPARD, T.—[Rhomb-porphry] at Yedmandale.  
*Naturalist*, Dec., p. 356.
- 125 ——— [Boulder at] Atwick, Brough, Dimlington, Holmpton,  
Hornsea, Withernsea. *Trans. Hull Geol. Soc.*, vol. v.,  
pt. 2, p. 5.
- 126 ——— Bibliography. List of Papers referring to the Geology,  
etc., of the East of Yorkshire and North Lincolnshire . . .  
1898. *Ibid.*, vol. v., pt. 1, pp. 27-28.
- 127 S[HEPPARD], T., and S[TATHER], J. W.—Field Meetings  
during 1898. [Filey, South Cave, Doncaster, Withern-  
wick, Malton, Holme-on-Spalding Moor, Spurn, Speeton,  
Brough, Middleton on the Wolds, etc.]. *Ibid.*, vol. v.,  
pt. 1, pp. 5, 6.
- 128 SIMPSON, W.—Nerland Clough: I.—Its Geology. *Halifax*  
*Naturalist*, pp. 30-32.
- 129 ——— Notes on a Section exposed in Commercial Street,  
Halifax. *Ibid.*, pp. 100-102.
- 130 ——— and ROBERT LAW.—[Boulders at] Mytholmroyd.  
*Naturalist*, Dec., pp. 362-363.
- 131 SOLLAS, W. J.—Fossils in the Oxford University Museum.  
On two New Genera and Species of Crinoidea (*Brah-  
macrinus ponderosus* and *Cicerocrinus elegans*). [Car-  
boniferous Limestone, Yorkshire]. *Quart. Journ. Geol.*  
*Soc.*, vol. lvi., pp. 264-272.
- 132 SPEIGHT, H.—Upper Wharfedale; being a complete  
account of the History, Antiquities, and Scenery of the  
Picturesque Valley of the Wharfe from Otley to Langs-  
trothdale. [Geology, pp. 92, 227, 228, 251, 333, 364,  
470, 474]. Pp. 518. 8vo. *London*.
- 133 STATHER, J. W.—Report of the East Riding Boulder Com-  
mittee, 1898. [Easington, Hornsea, Atwick, Brough,  
Dimlington, Withernsea, Scalby Mills, Burniston, etc.].  
*Trans. Hull Geol. Soc.*, vol. v., pt. 1, pp. 5-6.
- 134 ——— A Buried Valley in the Chalk at Flambro' Station.  
*Ibid.*, pp. 12-14.
- 135 ——— The Source and Distribution of the far-travelled  
Boulders of East Yorkshire. [Percentages at different  
localities]. *Rep. Brit. Assoc.* for 1900, pp. 759, 760;  
*Naturalist*, pp. 363, 364; *Geol. Mag.*, dec. iv., vol.  
viii., pp. 17-20, 1901.

- 136 STATHER, J. W.—On the Glacial Phenomena of the North-East corner of the Yorkshire Wolds. *Rep. Brit. Assoc.* for 1900, p. 760.
- 137 ——— The Divisions of the Cretaceous Series in Yorkshire. *Trans. Leeds Geol. Assoc.*, pt. 12, p. 26.
- 138 ——— [Boulders at] Ayton, Bainton. *Naturalist*, Dec., pp. 351-357.
- 139 ——— Relative Proportions of Different Types of Boulders on the East Coast [Yorkshire; abstract]. *Naturalist*, Dec., pp. 363-364.
- 140 ——— [See T. Sheppard].
- 141 STILES, M. H.—Freshwater Sponges in Yorkshire. [From a sub-fossil deposit at Askern bog]. *Naturalist*, Nov., p. 331.
- 142 TEALL, J. J. H.—The Natural History of Phosphatic Deposits. [Yorkshire, pp. 379, 380-382]. *Proc. Geol. Assoc.*, vol. xvi., pp. 369-387.
- 143 THOMPSON, W. H.—The Pioneers of Yorkshire Geology. [Alludes to Smith, Williamson, Phillips, Bean, Sedgwick, Buckland]. *Trans. Hull Geol. Soc.*, vol. v., pp. 22, 23.
- 144 TIDDEMAN, R. H.—Geological Notes for the Malham Excursion. *Handb. Brit. Assoc. Excursions*, pp. 8-16.
- 145 TOMES, R. F.—Contributions to a history of the Mesozoic Corals of the County of York. [Malton, Cloughton, Speeton]. *Proc. Yorks. Geol. Soc.*, vol. xiv., pt. 1, pp. 72-85.
- 146 WALLACE, A. R.—Studies Scientific and Social. [Yorkshire Glacial Geology, vol. i., pp. 82-88]. 2 vols. Pp. xv., 532, viii., 535. 8vo. *London*.
- 147 WALTON, F. F.—[Rhomb-porphry at] Brandesburton. *Naturalist*, Dec., p. 356.
- 148 WATTS, W.—Presidential Address. [Millstone Grit of Little Don Valley]. *Trans. Brit. Assoc. Waterworks Eng.*, vol. iv., for 1899, pp. 5-19.
- 149 WATTS, W. W.—Photographs of Geological Interest in the United Kingdom. [Tenth] Report of the Committee . . . *Rep. Brit. Assoc.* for 1899, pp. 377-397.

- 150 WAITS, W. W.—Photographs of Geological Interest in the United Kingdom. [Eleventh] Report of the Committee. . . . *Rep. Brit. Assoc.* for 1900, pp. 350-369.
- 151 WELLBURN, E. D.—On some Fossil Fish from the Millstone Grit Rocks (summary). *Rep. Brit. Assoc.* for 1900, p. 750 ; *Geol. Mag.*, dec. iv., vol. viii., pp. 80, 81, 1901.
- 152 ——— On the genus *Megalichthys* Agassiz: its history, systematic position and structure. [Refers to the specimen in the Leeds Museum]. *Proc. Yorks. Geol. Soc.*, vol. xiv., pt. 1, pp. 52-71.
- 153 ——— On the Occurrence of *Strepsodus sulcidens*, Handcock and Atthey, in the Yorkshire Coal-Measures [in the Brighouse Museum]. *Ibid.*, pp. 86, 87.
- 154 ——— On *Rhadinichthys monensis* Egerton, and its Distribution in the Yorkshire Coalfield. [Lower and Middle Coal-Measures]. *Geol. Mag.*, dec. iv., vol. vii., pp. 260-263. These three papers reviewed by H. E. SAUVAGE. *Rev. Crit. de Pal.*, 1901, pp. 68, 69.
- 155 ——— On the Fish Fauna of the Yorkshire Coal-Measures. *Rep. Brit. Assoc.* for 1900, pp. 749, 750 ; *Proc. Yorks. Geol. Soc.*, vol. xiv., pt. 2, pp. 159-174, 1901.
- 156 ——— [See H. E. Sauvage].
- 157 WILSON, J. E.—Geology of Bradford. [Map, Bradford, Settle, etc.,  $\frac{3}{4}$  inch to 4 miles]. *Handb. Brit. Assoc.*, pp. 118-133, 2 plates. 8vo. *Bradford*.
- 158 ——— On a Glacial 'Extra-morainic' Lake occupying the Valley of the Bradford Beck. *Rep. Brit. Assoc.* for 1900, pp. 755, 756.
- 159 WOODWARD, A. S.—On a New Species of *Deltodus* from the Lower Carboniferous (Yoredale Rocks) of Yorkshire. [Blackthorn Farm, near Slaidburn]. *Ann. Mag. Nat. Hist.*, ser. 7, vol. v., pp. 419, 420.
- 160 ——— [See H. E. Sauvage].
- 161 W[OODWARD], H. B.—Scenery and Geology. [Review of Marr's 'Scientific Study of Scenery']. *Nature*, March 8, pp. 441-442.

1901.

- 1 ANON.—The Court Guide and County Blue Book of the North and East Ridings of Yorkshire. [Geology by H. M. PLATNAUER, pp. 91-113]. 8vo. *London*.

- 2 ANON.—The Lost Land of England. [Holderness Coast, etc.]  
*The Strand Magazine*, vol. xxii., pp. 398-408.
- 3 ——— Sections of Borings for Salt near Middlesbrough.  
*Proc. Cleveland Nat. Field Club*, vol. i., pp. 82, 83.
- 4 ——— Catalogue of the Mesozoic Plants . . . in the British  
Museum, by A. C. SEWARD. [Review of]. *Nature*,  
April 4th, pp. 537-8.
- 5 ——— Catalogue of the Bateman Collection, by E. HOWARTH  
[review of]. *Geol. Mag.*, Jan., pp. 37-40.
- 6 ——— Memoirs of the Geological Survey. . . . The Cre-  
taceous Rocks of Britain, by A. J. JUKES-BROWNE  
[review of]. *Geol. Mag.*, Feb., pp. 82-89.
- 7 ——— Some Yorkshire Claypits. *Quarry*, vol. v., pp.  
515-524.
- 8 ——— [Signed 'OVERWHELMED RECORDER'].—The Fish  
Fauna of the Millstone Grits [letters on]. *Geol. Mag.*,  
June, p. 286.
- 9 ACKROYD, W.—Researches on Moorland Waters, pt. 2.  
On the Origin of the combined Chlorine. [Widdop].  
*Journ. Chem. Soc.*, vol. lxxix., pp. 673, 674.
- 10 ——— On the Circulation of Salt in its Relation to  
Geology. *Geol. Mag.*, Oct., pp. 445-449.
- 11 ——— On the Distribution of Chlorine in West Yorkshire.  
*Rep. Brit. Assoc.* (Bradford), pp. 694-695.
- 12 ——— On a limiting standard of Acidity for Moorland  
Waters. *Rep. Brit. Assoc.* (Bradford) for 1900, pp  
695-696.
- 13 ASHLEY, T.—Notes on the Occurrence of the Adwalton  
Stone Coal and the Halifax Hard Coal. *Proc. Yorks.*  
*Geol. Soc.*, vol. xiv., pt. 2, pp. 253-260.
- 14 BAIRSTOW, U.—Local Land Movements. [Around Halifax].  
*Halifax Nat.*, Dec., pp. 76-82, 101-105.
- 15 BARNES, J., and W. F. HOLROYD.—Notes on a Fossil found  
in the Shales below Millstone Grit, Pule Hill, Marsden.  
[*Cyrtoceras cornu-bovis*]. *Trans. Manchester Geol. Soc.*,  
vol. xxvii., pt. 6, pp. 156-159.
- 16 BELINFANTE, L. L., [edited by] W. R. JONES, [compiled by]  
Geological Literature added to the . . . Library during  
the year ended Dec. 31st. 1900. *London*. PP. 182.

- 17 BONNEY, T. G.—Yorkshire Boulders. [Letter criticising J. W. Stather's paper]. *Geol. Mag.*, dec. iv., vol. viii., p. 95.
- 18 ——— Names for British Ice-Sheets. *Ibid.*, pp. 187, 332.
- 19 BROWN, W. M.—Subject Matter Index of Mining and Metallurgical Literature for . . . 1900. Pp. 8.
- 20 BUCKMAN, S. S.—Homœomorphy among Jurassic Brachiopoda. [Table of Strata from Yorkshire to Dorset]. *Proc. Cotteswold Nat. Field Club*, vol. xii., pt. 4, pp. 231-290. Reviewed in *Geol. Mag.*, dec. iv., vol. viii., pp. 326, 327; see also p. 478.
- 21 CARTER, W. L.—Secretary's Report, 1900. [Excursions to Clitheroe and the Cheviot Hills; report of Underground Waters of West Yorkshire]. *Proc. Yorks. Geol. Soc.*, vol. xiv., pt. 2, pp. 275-315.
- 22 ——— The Underground Waters of North-west Yorkshire. Pt. 1. The Sources of the Aire. *Geol. Mag.*, Feb., pp. 75-77; *Rep. Brit. Assoc.* (Bradford), pp. 735-737.
- 23 COLE, E. M.—Waterspouts on the Yorkshire Wolds. [Denuding effects on Chalk and subsoil]. *Trans. Hull Field Nat. Club*, vol. i., No. 4, pp. 225-228.
- 24 COSSMANN, M.—A Monograph of British Carboniferous Lamellibranchiata by W. HIND [review of]. *Rev. Crit. de Paléozoologie*, July, pp. 135-136.
- 25 CROFTS, W. H.—Notes on Sections exhibited during the Excavation of the Alexandra Dock Extension, Hull. *Proc. Yorks. Geol. Soc.*, vol. xiv., pt. 2, pp. 245-252.
- 26 ——— Sections at the Alexandra Dock Extension, Hull. *Rep. Brit. Assoc.* (Bradford), pp. 764-765.
- 27 CUTTRISS, S. W.—The Caves and Potholes of Ingleborough and the District. *Geol. Mag.*, Feb., pp. 77-79; *Rep. Brit. Assoc.* (Bradford), pp. 734-735.
- 28 DAKYNS, J. R.—Origin of Coal. [Yoredale Rocks, Peat underclay]. *Geol. Mag.*, dec. iv., vol. viii., p. 135.
- 29 ——— Cheviot Porphyrites in the Boulder-clay of East Yorkshire. *Ibid.*, p. 143.
- 30 ——— [See A. Strahan].
- 31 DUNSTON, G.—[See A. Wilson.]
- 32 DWERRYHOUSE, A. R.—The Movements of Underground Waters of Craven. First Report of the Committee.

- Geol. Mag.*, Feb., pp. 72-75. *Rep. Brit. Assoc.* (Bradford), pp. 346-349.
- 33 [ELSDEN, J. V., and A. GREENWELL].—The Building Stones of London. [Huddlestons dolomite. Aislaby Sandstone]. *Quarry*, vol. vi., pp. 145-166.
- 34 — [See A. Greenwell]
- 35 FLETCHER, J. S.—A Picturesque History of Yorkshire, vol. iii. 4to. (See under 1899).
- 36 FLETCHER, W. W. E.—Report of the Local Government Board upon the Sanitary Circumstances and Administration of the Gildersome Urban District, and upon the recent Prevalence of Enteric Fever therein. Pp. 17. *Local Government Board Report.* (No. 168). Fol. London.
- 37 FOSTER, H. T.—The Geology of the Thornecliffe District, South Yorkshire. *Journ. Brit. Soc. Min. Students*, vol. xxiii., pp. 69-77. Map. *Coll. Guard.*, vol. lxxxi., pp. 198-200.
- 38 GALLOWAY, R. L.—Annals of Coal-mining and the Coal Trade. *Coll. Guard.*, vol. lxxxi., pp. 90, etc., vol. lxxxii., pp. 40, etc.
- 39 GOWLAND, WILLIAM.—The Early Metallurgy of Silver and Lead. Pt. 1. Lead [references to early lead mines in Yorkshire]. *Archæologia*, vol. lvii., pt. 2, pp. 359-422.
- 40 GREEN, J. A.—Two Explorations in Ingleborough Cave. *The Yorks. Ramblers' Club Journ.*, vol. i., No. 3, pp. 220-238, 233, 234.
- 41 GREENLEY, EDWARD.—Recent Denudation in Nant Ffrancon, North Wales [refers to the Langtoft Waterspout]. *Geol. Mag.*, Feb., pp. 68-69.
- 42 GREENWELL, A., and J. V. ELSDEN.—Roads: their Construction and Maintenance; with Special Reference to Road Materials. [Cleveland Whinstone, p. 31]. ('The Builder' Student Series). Pp. vii., 8vo. London.
- 43 GREENWELL, A.—[See J. V. Elsdon].
- 44 HAWKESWORTH, E.—Wetherby Re-visited by the Yorkshire Naturalists. *Naturalist*, Nov., pp. 326-327. [See F. A. Lees].

- 45 HIND, W.—A Monograph of the British Carboniferous Lamellibranchiata. Vol. i., Index. Vol. ii., pt. 1. [Yorkshire, pp. 3, 5, 7, 9, 12, 13, 15, 16, 18, 19, 20, 24, 29, 30, 33, 34]. Pp. 1-34; plates i.-vi. *Monogr. Pal. Soc.*, vol. lv., for the year 1901. See also under M. Cossmann.
- 46 ——— Life-Zones in the British Carboniferous Rocks. Report of the Committee. *Rep. Brit. Assoc.* (Bradford), pp. 340-342.
- 47 ——— and J. A. HOWE.—The Geological Succession and Palæontology of the Beds between the Millstone Grit and the Limestone-Massif at Pendle Hill and their Equivalents in other parts of Britain. *Quart. Journ. Geol. Soc.*, vol. lvii., pp. 347-404; In abstract, *Geol. Mag.*, dec. iv., vol. viii., pp. 185, 186; *Nature*, vol. lxiii., pp. 506, 507.
- 48 HOBSON, B.—Correlation Tables of British Strata. *Manchester Museum Handbook*, pp. 1-2, tables 1-19.
- 49 HOLROYD, W. F.—[See J. Barnes].
- 50 HOWARTH, J. H.—[See P. F. Kendall].
- 51 HOWE, J. ALLEN.—[See Wheelton Hind].
- 52 HUGHES, T. MCK.—Ingleborough. Pt. 1. Physical Geography. *Proc. Yorks. Geol. Soc.*, vol. xiv., pt. 2, pp. 125-150.
- 53 JONES, W. R.—[See L. L. Belinfante].
- 54 JOWETT, A. and H. B. MUFF.—A Preliminary Note on the Glaciation of the Keighley and Bradford Districts. *Rep. Brit. Assoc.* (Bradford), pp. 756-759.
- 55 KENDALL, P. F., and H. B. MUFF.—Evidences of Ancient Glacier-dammed Lakes in the Cheviots. [Refers to the distribution of Cheviot rocks in the Drift of the Yorkshire Coast]. *Geol. Mag.*, dec. iv., vol. viii., pp. 513-515.
- 56 ——— and J. H. HOWARTH.—Additions to the Records of the Yorkshire Boulder Committee's Fourteenth Year's Report, 1899-1900. [East Yorkshire]. *Naturalist*, pp. 217, 218.
- 57 ——— Erratic Blocks of the British Isles. Report of the Committee. *Rep. Brit. Assoc.* (Bradford), pp. 343-346.
- 58 KIDSTON, R.—The Flora of the Carboniferous Period. *Proc. Yorks. Geol. Soc.*, vol. xiv., pt. 2, pp. 189-230.
- 59 ——— Flora of the Coal Measures. *Rep. Brit. Assoc.* for 1900, p. 746; *Geol. Mag.*, dec. iv., vol. viii., p. 29.



- 60 LAMPLUGH, G. W.—Names for British Ice-sheets of the Glacial Period. *Geol. Mag.*, dec. iv., vol. viii., pp. 142, 284, 285.
- 61 ——— Note on the Age of the English Wealden Series. *Rep. Brit. Assoc.* (Bradford), pp. 766-767.
- 62 LAW, ROBERT, and WM. SIMPSON.—Report on the Drift Deposits of Mytholmroyd. *Proc. Yorks. Geol. Soc.*, vol. xiv., pt. 2, pp. 231-236.
- 63 LEECH, D. J.—Mineral Waters. *Materia Medica, Pharmacy, Pharmacology and Therapeutics*, edited by W. HALE WHITE. [Harrogate, pp. 874-6, 880-1]. 8vo. Many editions. *Edinburgh and London.*
- 64 LEES, F. A.—Wetherby revisited by the Yorkshire Naturalists. [Geological notes by E. HAWKESWORTH, pp. 326, 327]. *Naturalist*, pp. 325-332.
- 65 LOMAS, J.—On the Construction and uses of Strike Maps. *Rep. Brit. Assoc.* (Bradford), pp. 742-743.
- 66 MACTURK, G. W. B.—Hydrology (The Science of Water). Howdenshire and Adjoining Districts. Pp. 15. 8vo. *Hull.*
- 67 MARTIN, E. A.—The Mortimer Museum at Driffild. [Alludes to T. Sheppard's Catalogue]. *Sci. Goss.*, vol. vii., p. 249.
- 68 ——— A Boulder Monument. [Shap granite boulder taken out of the Tees and erected at Darlington]. *Ibid.*, p. 249.
- 69 ——— New Record from the Kellaways Sands. *Sci. Goss.*, Feb., p. 287.
- 70 MIDGLEY, W. W.—[Lecture on the Carboniferous Limestone Rocks at the Chadwick Museum, Bolton; alludes to Settle, Malham, etc.]. *Journ. Manchester Geog. Soc.*, vol. xvii., p. 68.
- 71 ——— The Flora of the Carboniferous Rocks. *Journ. Manch. Geog. Soc.*, vol. xvi., pp. 202-206.
- 72 MILLS, F. W., and R. H. PHILLIP.—The Diatomaceæ of the Hull District. [From the sub-fossil lacustrine deposits of Holderness, etc.]. *Trans. Hull Field Nat. Club.*, vol. i., pt. 4, pp. 157-224.
- 73 MITCHELL, C. A.—Barium in Boston Spa Water. [Analysis]. *Sci. Goss.*, vol. viii., No. 86, July, p. 54.
- 74 MONCKMAN, J.—The Glacial Geology of Bradford and the

- evidence obtained from recent excavations of a limestone tract on the south side of the valley. *Proc. Yorks. Geol. Soc.*, vol. xiv., pt. 2, pp. 151-158. [See 1900].
- 75 — Notes on Some Recent Excavations in the Glacial Drift of Bradford. *Rep. Brit. Assoc.* (Bradford), pp. 754-755.
- 76 MONCKTON, H. W.—On some Landslips in Boulder-clay near Scarborough. *Quart. Journ. Geol. Soc.*, vol. lvii., pp. 293-296; *Geol. Mag.*, dec. iv., vol. viii., p. 380.
- 77 MUFF, H. B.—[See A. Jowett].
- 78 — [See P. F. Kendall].
- 79 NEWTON, E. T.—British Pleistocene Fishes. [*Perca fluviatilis* Linn., from lacustrine deposits at Hornsea and Withernsea. *Gadus morrhua* Linn., from Pre-glacial beds at Sewerby]. *Geol. Mag.*, dec. iv., vol. viii., pp. 49-52. [See also *Naturalist*, 1902, p. 258].
- 80 PAVLOW, A. P.—Le Cretace Inferieur de la Russie et sa Fauna Premiere partie aperçu historique des recherches, suivi d'indications sur la distribution des mers et des terres aux differentes époques. Seconde partie. Cephalopodes du Neocomien superieur du type de Simbirsk. *Nouveau Memoires de la Société impériale des Naturalistes de Moscou*, Tome 16, livraison 3, pp. 87 (8 plates). *Moscow*.
- 81 PEARSON, H. W.—Oscillations in the Sea-level. [Yorkshire, p. 254]. *Geol. Mag.*, dec. iv., vol. viii., pp. 167-174, 223-231, 253-265.
- 82 PHILIP, R. H.—[See F. W. Mills].
- 83 PLATNAUER, H. M.—[See Anon.].
- 84 REED, F. R. C.—The Geological History of the Rivers of East Yorkshire, being the Sedgwick Prize Essay for 1900. Pp. 103. 8vo. *London*. Reviewed in *Geol. Mag.*, Aug., pp. 370-371.
- 85 RHODES, J.—Note on the Discovery of a Silicified Plant Seam beneath the Millstone Grit of Swarth Fell, West Riding of Yorkshire. *Geol. Mag.*, dec. iv., vol. viii., p. 520; *Rep. Brit. Assoc.* for 1901, p. 656.
- 86 ROBERTS, A.—The Use and Abuse of the Harrogate Mineral Waters. [Includes the works published in 1893 and 1894]. Pp. 46 and analyses. 8vo. *Harrogate*.

- 87 SAUVAGE, H. E.—[Review of]. 'On the Genus *Megalichthys*,' 'On the Occurrence of *Strepsodus sulcidens* in the Yorks. Coal Measures,' and 'On *Rhadinichthys monensis* . . . in the Yorkshire Coalfield,' by E. D. WELLBURN. *Revue Critique de Palæozoologie*, pp. 68-69.
- 88 SCOTT, D. H.—The Primary Structure of Certain Palæozoic Stems referred to *Araucarioxylon* [from north of England] *Rep. Brit. Assoc.* (Bradford), pp. 945-946.
- 89 ——— On the Structure and Affinities of Fossil Plants from the Palæozoic Rocks, iv. Summary in *Geol. Mag.*, April, pp. 174-175. —
- 90 ——— [Signed D.H.S.].—Catalogue of Mesozoic Plants in the . . . British Museum . . . by A. C. SEWARD [Review of]. *Geol. Mag.*, June, pp. 274-276.
- 91 SEWARD, A. C.—On the Structure and Origin of Jet. *Journ. Soc. Arts*, vol. xlix., p. 796; *Rep. Brit. Assoc.* for 1901, pp. 856, 857.
- 92 ——— [See Anon.].
- 93 ——— The Jurassic Flora of East Yorkshire. *Geol. Mag.*, Jan., pp. 36-37; *Rep. Brit. Assoc.* (Bradford), pp. 765-766.
- 94 SHEPPARD, T.—A Fossil Walrus in Holderness. [*Trichechus rosmarus* L., from glacial gravels]. *Trans. Hull Field Nat. Club.* vol. i., pt. 4, p. 250.
- 95 ——— Yorkshire Coast-Erosion Committee. Report for 1899 and 1900. *Naturalist*, pp. 125-128.
- 96 ——— Geology of the Neighbourhood of Brough. East Yorkshire. *Ibid.*, pp. 129-144.
- 97 ——— Yorkshire Naturalists at Brough. [*Belemnitella plena* zone figured]. *Ibid.*, pp. 219-229.
- 98 ——— Yorkshire Naturalists at Wykeham. [Geological notes]. *Ibid.*, pp. 298-301.
- 99 ——— The Sources and Distribution of the Far-Travelled Boulders of East Yorkshire. *Geol. Mag.*, dec. iv., vol. viii., pp. 17-20; *Rep. Brit. Assoc.* for 1900, pp. 759, 760.
- 100 ——— Bibliography . . . North of England. Geology and Palæontology, 1897. *Naturalist*, Jan. and Feb., pp. 17-36.
- 101 ——— Bibliography . . . North of England. Geology and Palæontology, 1898. *Naturalist*, Oct. and Nov., pp. 305-324.

- 102 SHEPPARD, T.—Burstwick Gravel Pit, Holderness [Shap granite, etc.]. *Naturalist*, July, p. 217.
- 103 ——— [See E. A Martin].
- 104 SIMPSON, W.—Glacial Drift Deposits at Mytholmroyd. *Halifax Naturalist*, pp. 93-96.
- 105 ——— [See R. Law].
- 106 SPEIGHT, HARRY.—Upper Wharfedale, from Otley to Langstrothdale, Pp. 518.
- 107 STATHER, J. W.—Notes on East Yorkshire Boulders. *Proc. Yorks. Geol. Soc.*, vol. xiv., pt. 2, pp. 237-244.
- 108 ——— On the Glacial Phenomena of the North-east Corner of the Yorkshire Wolds. *Rep. Brit. Assoc.* (Bradford), p. 760.
- 109 ——— Atwick, Kirkmoorgate [etc., Boulders at]. *Naturalist*, July, pp. 217-218.
- 110 ——— The Source and Distribution of the Far-travelled Boulders of East Yorkshire. *Geol. Mag.*, Jan., dec. iv., vol. viii., pp. 17-20. *Rep. Brit. Assoc.* (Bradford), pp. 759-760.
- 111 STRAHAN, A.—Succession of Strata in the Yoredale Rocks. [Reply to J. R. Dakyns]. *Geol. Mag.*, dec. iv., vol. viii., p. 188.
- 112 THRESH, J. C.—Water and Water Supplies. [Yorkshire, pp. 8, 33, 60, 106, 139, 140, 148, 176]. Ed. 3. Pp. xv., 527. 8vo. *London*. Ed. 1 and 2, 1896.
- 113 TIDDEMAN, R. H.—Notes on the Geology of Clitheroe and Pendle Hill. *Proc. Yorks. Geol. Soc.*, vol. xiv., pt. 2, pp. 178-182.
- 114 ——— On the Formation of Reef Knolls. *Rep. Brit. Assoc.* for 1900, pp. 740-742; *Geol. Mag.*, dec. iv., vol. viii., pp. 20-23.
- 115 TRAQUAIR, R. H.—The Ganoid Fishes of the British Carboniferous Formations. Pt. 1, pp. 61-87; plates viii.-xviii. [*Elonichthys binneyi*, *E. aitkeni*, *E. egertoni*, pp. 76, 80, 82]. *Monogr. Pal. Soc.*, vol. lv.
- 116 VEITCH, W. Y.—Sections of borings for Salt near Middlesbrough. *Proc. Cleveland Nat. Field Club*, vol. i., No. 3, pp. 83-86.
- 117 WATTS, W.—Report of the Delegate to the . . . British

- Association. *Trans. Manch. Geol. Soc.*, vol. xxviii., pp. 67-74.
- 118 WATTS, W. W.—Photographs of Geological Interest in the United Kingdom. Twelfth Report of the Committee. . . . *Rep. Brit. Assoc.* for 1901, pp. 339-352.
- 119 ——— Photographs of Geological Interest. Tenth Report of Committee . . . . *Rep. Brit. Assoc.* (Bradford), pp 350 369.
- 120 WELLBURN, E. D.—On the Fish Fauna of the Millstone Grits of Great Britain. *Geol. Mag.*, dec. iv., vol. viii., pp. 216-222 ; Noticed by H. E. SAUVAGE ; *Rev. Crit. de Pal.*, 1902 ; pp. 8, 9. [See also *Rep. Brit. Assoc.* for 1900, p. 750].
- 121 ——— On the Occurrence of Fish Remains in the Limestone Shales (Yoredale) at Crimsworth Dean (Horse Bridge Clough), near Hebden Bridge, in the West Riding of Yorkshire. *Proc. Yorks. Geol. Soc.*, vol. xiv., pt. 2, pp. 175-177.
- 122 ——— On the Pectoral Fin of *Cælacanthus*. [*C. tingleyensis* from Middle Coal-Measures, Tingley]. *Geol. Mag.*, dec. iv., vol. viii., pp. 71, 72.
- 123 ——— On the Fish Fauna of the Yorkshire Coal Measures. *Proc. Yorks. Geol. Soc.*, vol. xiv., pt. 2, pp. 159-174.
- 124 ——— On the Fish Fauna of the Yorkshire Coalfields. *Geol. Mag.*, Jan., p 37. *Rep. Brit. Assoc.* (Bradford), p. 1900, pp. 749-750.
- 125 ——— [See H. E. Sauvage].
- 126 WHEELER, W. H.—The Commercial Uses of Peat. [Hatfield Chase]. *Nature*, vol. lxiii., pp. 590, 591.
- 127 ——— The Source of Warp in the Humber. *Geol. Mag.*, dec. iv., vol. viii., pp. 568-570 ; *Rep. Brit. Assoc.* for 1901, pp. 652, 653.
- 128 WHITE, W. HALE.—[See D. J. Leech].
- 129 WILSON, A., and G. DUNSTON.—Section of Strata at South Carr, Lincolnshire. *Trans. Manchester Geol. Soc.*, vol. xxvii., pt. 2, pp. 57-64.
- 130 WILSON, J. E.—On a Glacial 'Extra-Morainic' Lake occupying the Valley of the Bradford Beck. *Rep. Brit. Assoc.* (Bradford), for 1900, pp. 755-756.

- 131 WOODS, H.—A Monograph of the Cretaceous Lamelli-branchiata of England. Pt. 3. [*Spondylus gibbosus*, *S. latus*, *Plicatula inflata*, pp. 119, 124, 141]. Pp. 113-144; plates xx.-xxvi. *Monogr. Pal. Soc.*, vol. lv., for the year 1901.
- 132 WOODWARD, A. S.—Catalogue of the Fossil Fishes in the British Museum (Natural History). Pt. 4, pp. xxxix+636. [See 1889].
- 133 WOODWARD, H., and H. B. WOODWARD.—Table of British Strata. 1 p. and 4 tables. Fol. *London*.
- 134 WOODWARD, H. B.—[See H. Woodward].

## 1902.

- 1 ANON.—Analyses of British Coals and Coke, collected and compared. [Yorkshire, vol. lxxxiii., pp. 1117, etc., vol. lxxxiv., pp. 18, 74]. *Coll. Guard.*, vol. lxxxiii., pp. 665, etc., and vol. lxxxiv., pp. 18, etc.
- 2 ——— The Whinstone and other Road-metal Quarries of the North of England. [Great Ayton]. *Quarry*, vol. vii., pp. 749-752, vol. viii., pp. 77-82, 141-145; 1903.
- 3 ——— [G. F. D.].—Water Supply. *Ency. Brit.* Ed. 10. Vol. xxxiii., pp. 769-792.
- 4 ——— Catalogue of the More Important Papers . . . Published by the Corresponding Societies . . . during 1901. *Rep. Brit. Assoc.* (Glasgow), pp. 490-516.
- 5 ACKROYD, W.—On the Circulation of Salt and its Bearin on Geological Problems, more particularly that of the Geological Age of the Earth. [Map of the district N.W. of Halifax]. *Proc. Yorks. Geol. Soc.*, vol. xiv., pt. 3, pp. 401-421; *Rep. Brit. Assoc.* for 1901, pp. 654-655; *Chem. News*, vol. lxxxi., pp. 265-268.
- 6 ——— On the Inverse Relation of Chlorine to Rainfall. [Result of observations at Halifax]. *Rep. Brit. Assoc.* for 1901, p. 603.
- 7 ——— On the Distribution of Chlorine in Yorkshire. Pt. 2. *Ibid.*
- 8 ALLEN, H. A.—Catalogue of Types and Figured Specimens of British Fossil Phyllocarida preserved in the Museum of Practical Geology, London. [*Ceratiocaris leptodactylus*

- from Dent]. *Summary of Progress, Geol. Survey, U.K.*, 1901, pp. 200-203.
- 9 ALLEN, H. A.—Catalogue of Types and Figured Specimens of British Palæozoic Echinodermata preserved in the Museum of Practical Geology, London. [*Melonites etheridgii* from Clitheroe]. *Ibid.*, pp. 204-211.
- 10 AVEBURY, LORD.—The Scenery of England and the Causes to which it is due. [Yorkshire, pp. 169, 277, 456, 485]. Pp. xxvi., 534. 8vo. London. Review in *Nature*, vol. lxx., pp. 490-493, and *Geol. Mag.*, pp. 232-235.
- 11 AUDEN, G. A.—[Boulder at] Dringhouses, York. *Naturalist*, July, p. 213.
- 12 BARROW, G.—On the Alteration of the Lias Shale of the Whin Dyke at Great Ayton, in Yorkshire. *Rep. Brit. Assoc.*, for 1901, p. 654.
- 13 [BELINFANTE, L. L.].—Geological Literature added to the Geological Society's Library during . . . 1901. London. Pp. 195.
- 14 B[LAKE], J. F.—Professor Ralph Tate. Obituary Notice. *Geol. Mag.*, dec. iv., vol. ix., pp. 87-95.
- 15 BOGG, E.—The Old Kingdom of Elmet: York and the Ainsty District: A Descriptive Sketch of the History, Antiquities, Legendary Lore, Picturesque Features, and Rare Architecture. [Geology, pp. 1-5, 278]. Pp. xxvii., 391. 8vo. London. Manchester. York. Leeds.
- 16 BONNEY, T. G.—Fragmental Rocks as Records of the Past. [Speeton, p. 226]. *Proc. Liverpool Geol. Soc.*, vol. ix., pt. 2, pp. 220-237.
- 17 BONNEY, T. G., E. BRADBURY and W. S. CAMERON.—The Humber and its Tributaries. [in 'Rivers of Great Britain,' (1) Rivers of the East Coast. Roy. 4to. London. Pp. 376].
- 18 ——— The Story of our Planet. Ed. 3. [See 1893].
- 19 BRADBURY, E.—[See T. G. Bonney].
- 20 BRODE, T. AINSWORTH.—Yorkshire Naturalists at Coxwold and Kilburn. [Geological Notes by J. E. HALL]. *Naturalist*, Sept., p. 284.
- 21 BRODRICH, HAROLD.—'Caves.' *Seventh Rep. Southport Soc. of Nat. Sci.*, pp. 25-28.

- 22 BROWN, A. & SONS.—Pocket Map to Illustrate the Flora and Geology of the East Riding.
- 23 BROWN, M. WALTON.—Subject Matter Index of Mechanical and Metallurgical Literature for the year 1900. Issued by the North of England Institute of Min. and Mech. Engineers, pp. 48+197.
- 24 BUTTERFIELD, A. E.—Circumstances relative to the Suspension and Deposit of Detritus in the River Humber. Pp. 12. Privately printed.
- 25 CAMERON, W. S.—[See T. G. Bonney].
- 26 CARTER, W. L.—Secretary's Report, 1901. [Field Excursion to Leyburn, etc.]. *Proc. Yorks. Geol. Soc.*, vol. xiv., pt. 3, pp. 497-524.
- 27 CHAPMAN, F.—Foraminifera, an Introduction to the Study of the Protozoa. [Yorkshire Red Chalk, p. 625]. Pp. xvi., 354. 8vo. *London*.
- 28 CORBETT, H. H.—Yorkshire Naturalists at Conisborough and Doncaster. [Geological notes]. *Naturalist*, pp. 117-119.
- 29 ——— Yorkshire Naturalists at Bawtry. *Naturalist*, Dec., pp. 373-375.
- 30 COSSMANN, M.—[Review of] a Monograph of the British Carboniferous Lamellibranchiata. Vol. ii., pt. 1, by W. HIND. *Revue Critique Paléozoologie*, April, pp. 73-74.
- 31 [CROFTS, W. H.].—Pocket Map of the Geology and Flora of the East Riding of Yorkshire. Scale 8 miles to 1 inch. Published by A. Brown & Sons, *Hull*.
- 32 ——— Brantinghamthorpe [Boulders]. *Trans. Hull Geol. Soc.*, vol. v., pt. 2, p. 30.
- 33 CROSSLAND, C.—Some Place Names in the Parish of Halifax, considered in relation to surrounding Natural Features. [Geological notes]. *Trans. Yorks. Dialect Soc.*, June pp. 3-23.
- 34 DICKENSON, J.—Lead Mining Districts of the North of England and Derbyshire. [Pennine Chain]. *Trans. Manchester Geol. Soc.*, vol. xxvii., pp. 218-265, Discussion, pp. 266-268.
- 35 DOUGLAS, J.—The Analyses of British Coals and Coke collected and compared. *Coll. Guard.*, vol. lxxxiv., pp. 74 [and various]-1344.



- 36 DWERRYHOUSE, A. R.—The Movements of Underground Waters of North-west Yorkshire. Second Report of the Committee. *Rep. Brit. Assoc.* for 1901, pp. 337, 338.
- 37 ——— The Glaciation of Teesdale, Weardale, and the Tyne Valley, and their Tributary Valleys. *Quart. Journ. Geol. Soc.*, vol. lviii., pp. 572-608. Maps. Abstract in *Geol. Mag.*, dec. iv., vol. ix., pp. 84, 85. [See also *Naturalist*, Jan., 1903, p. 16].
- 38 EASTMAN, C. R.—On the genus *Peripristis* St. John. [*P. bennei*, from the Carboniferous Limestone, Richmond]. *Geol. Mag.*, dec. iv., vol. ix., pp. 388-391.
- 39 [ELSDEN, J. V.].—The 'Quarry' Collection of Building Stones. *Quarry*, vol. vii., pp. 29-32.
- 40 FEARNSIDES, W. G.—[Shap Granite at] Horbury. *Naturalist*, July, p. 214.
- 41 GALLOWAY, R. L.—Annals of Coal-mining and the Coal Trade. *Coll. Guard.*, vol. lxxxiii., pp. 90, 687, 1229.
- 42 GARROD, A. E.—The Climates and Baths of Great Britain. Vol. ii. [Vol. i., 1895].
- 43 GERRARD, J.—Fragments of Insect Wings from the Barnsley Seam at Monckton Main Colliery. [Exhibited at the meeting of the Manchester Geological Society]. *Trans. Manchester Geol. Soc.*, vol. xxvii., pt. 13, p. 323.
- 44 GIBSON, W.—Notes on the Goole and Marshland Light Railway. *Summary of Progress of the Geological Survey* for 1901, pp. 64-65.
- 45 GREGSON, W.—[Boulders at] Kirklington. *Naturalist*, July, p. 214.
- 46 HALL, J. E.—Yorkshire Naturalists at Coxwold and Kilburn. [Geological notes]. *Naturalist*, p. 284.
- 47 HARKER, A.—Petrology for Students: an Introduction to the Study of Rocks under the Microscope. Ed. 3. Pp. viii., 346. 8vo. *Cambridge*. Ed. 1, 1895.
- 48 HAWKESWORTH, E.—[Boulders at] Wighill, near Tadcaster. *Naturalist*, July, p. 214.
- 49 HERDMAN, W.—The Yoredale Rocks of Teesdale. Their probable age, deposition, and denudation, with notes on the Glacial Epoch, and on the formation now in progress in Teesdale. Pp. 16.

- 50 HILL, E.—On the Matrix of the Suffolk Chalky Boulder-clay. [Its relation to the Yorkshire Area]. *Quart. Journ. Geol. Soc.*, vol. lviii., pp. 179-184.
- 51 HIND, W.—Report of the Committee on the Life-zones in the British Carboniferous Rocks. *Rep. Brit. Assoc.* for 1901, pp. 288-296.
- 52 ——— On the Characters of the Carboniferous Rocks of the Pennine System. *Proc. Yorks. Geol. Soc.*, vol. xiv., pt. 3, pp. 422-464.
- 53 ——— [See M. Cossmann].
- 54 HOWARTH, J. H.—[The Yorkshire Boulder Committee and its Work], Note on. *Naturalist*, July, pp. 221-222.
- 55 ——— [See P. F. Kendall].
- 56 HUGHES, T. MC.—Ingleborough. Pt. 2. Stratigraphy. *Proc. Yorks. Geol. Soc.*, vol. xiv., pt. 3, pp. 323-343.
- 57 JUKES-BROWNE, A. J.—The Student's Handbook of Stratigraphical Geology. [Frequent references to Yorkshire]. Pp. vii., 589. 8vo. *London*.
- 58 KENDALL, P. F.—[Sixth] Report . . . on Erratic Blocks, [mostly Yorkshire]. *Rep. Brit. Assoc.* for 1901, pp. 283-288.
- 59 ——— Report of Excursion to Coxwold and Kilburn. *Naturalist*. Pp. 283, 284.
- 60 ——— Origin of the Rosedale Ironstone. *Ibid.*, p. 216.
- 61 ——— Current Bedding in the Carboniferous Limestone. [Above the Waterfall, Gordale Scar.]. *Ibid.*, p. 216.
- 62 ——— *Saccamina carteri* Brady, in Yorkshire. [Bolton Woods and Clapham]. *Ibid.*, p. 222.
- 63 ——— A System of Glacier-Lakes in the Cleveland Hills. *Quart. Journ. Geol. Soc.*, vol. lviii., pp. 471-571; Abstract in *Geol. Mag.*, dec. iv., vol. ix., pp. 83, 84; *Naturalist*, 1903, pp. 14-16.
- 64 ——— [Boulders at] Settrington. *Naturalist*, July, p. 214.
- 65 ——— and J. H. HOWARTH.—The Yorkshire Boulder Committee and its Fifteenth Year's Work, 1900-1901. *Naturalist*, July, pp. 211-216.
- 66 KIDSTON, R.—The Flora of the Carboniferous Period. Second Paper. [Figures a large number of specimens from the Yorkshire Coalfield]. *Proc. Yorks. Geol. Soc.*, vol. xiv., pt. 3, pp. 344-400.

- 67 LAPWORTH, C.—The Place of Geology in Economics and Education. [Cleveland ironstone noted, p. 491]. *Proc. Trans. Liverpool Biol. Soc.*, vol. xvi., pp. 485-504.
- 68 LOUIS, H.—The Composition of certain British Coals. *Trans. N. Eng. Inst. Min. Mech. Eng. Ann. Rep.*, 1901, 2, vol. li., App., pp. lxxix.-lxxxii., Discussion, p. lxxxiii.
- 69 MADDOCK, H. E.—The Formation of Flint. [Refers to East Yorkshire examples]. *Trans. Hull Geol. Soc.*, vol. v., pt. 2, pp. 42-45.
- 70 MIERS, HENRY A.—Mineralogy: an Introduction to the Scientific Study of Minerals. Pp. xviii. + 584.
- 71 MONCKTON, H. W.—A Summary of the Principal Changes in South-East England during Pliocene and more Recent Times. [Refers to Holderness]. Abstract of a paper read before the British Association. *Geol. Mag.*, dec. iv., vol. ix., pp. 520, 521.
- 72 MOORE, C. C.—The Study of the Volcanic Composition of Rocks, and its importance to the Geologist. [Chalk, Millstone Grit, Shales, etc., of Yorkshire]. *Proc. Liverpool Geol. Soc.*, vol. ix., pt. 2, pp. 129-162.
- 73 POLLARD, W.—Weathering of Magnesian Limestone [from North Anston]. *Summary of Progress of Geol. Survey* for 1901, pp. 83-66.
- 74 PRATT, C. T.—Boulders at Cawthorne, Barnsley. [Lake District Rocks]. *Naturalist*, Aug., p. 258.
- 75 [READ, C. H.]—A Guide to the Antiquities of the Stone Age in the Department of British and Mediæval Antiquities. British Museum. Pp. 124.
- 76 REYNOLDS, S. H.—A Monograph of the British Pleistocene Mammalia Vol. ii., pt. 1. The Cave Hyæna. [Kirkdale]. Pp. 25; plates xiv. *Monogr. Pal. Soc.*, vol. lvi., for the year 1902.
- 77 RHODES, J.—Notes on the Occurrence of Phosphatic Nodules and Phosphate-bearing Rock in the Upper Carboniferous Limestone (Yoredale) Series of the West Riding of Yorkshire and Westmorland Border. *Rep. Brit. Assoc.* for 1901, p. 655; *Geol. Mag.*, dec. iv., vol. ix., pp. 39, 40; Analysis; *Summary of Progress, Geol. Survey*, for 1902, pp. 56, 57.

- 78 RHODES, J.—Note on the Discovery of a Silicified Plant seen beneath the Millstone Grit of Swarth Fell, West Riding of Yorkshire. *Rep. Brit. Assoc.* (Glasgow), p. 656.
- 79 ROBINSON, J. F.—The Flora of the East Riding of Yorkshire, including a Physiographical Sketch. [Geological features sketched]. Pp. 253. 8vo. *Hull. Trans. Hull Field Nat. Club*, vol. ii., pp. 1-253. (Also issued separately).
- 80 SAUVAGE, H. E.—[Reviews of] (1) On the Fish Fauna of the Millstone Grits of Great Britain; (2) On the Fish Fauna of the Yorkshire Coal-Measures; (3) On the Occurrence of Fish Remains in the Limestone Shales at Crimsworth Dean, near Hebden Bridge, Yorkshire, by E. D. WELLBURN. *Revue Critique de Paléozoologie* Jan., pp. 8-9.
- 81 SCOTT, D. H.—On the Primary Structure of certain Palæozoic Stems with the Dadoxylon Type of Wood. [Includes Yorkshire examples]. *Trans. Roy. Soc. Edinburgh*. Vol. xi., pt. 2, No. 17.
- 82 SEWARD, A. C.—A Chapter on Plant Evolution: Jurassic Floras. [Refers to East Yorkshire]. *Rep. Brit. Assoc.* for 1901, p. 856.
- 83 ——— The Structure and Origin of Jet. *Rep. Brit. Assoc.* (Glasgow), pp. 856-857.
- 84 SHEPPARD, T.—The Yorkshire Boulder Committee and its Work. A Retrospect. [Review of its work since 1886]. *Naturalist*, pp. 217-222.
- 85 ——— Large Mammoth's Tooth at Aldborough. *Ibid.*, p. 258.
- 86 ——— Yorkshire Naturalists at North Grimston. *Ibid.*, pp. 293-301.
- 87 ——— Reindeer Antler in the Peat, Withernsea. *Ibid.*, p. 304.
- 88 ——— Perthshire Rocks in East Yorkshire. *Ibid.*, p. 351.
- 89 ——— Landslip at Withernsea. *Ibid.*, p. 365.
- 90 ——— Yedmandale [Boulder]. *Trans. Hull Geol. Soc.*, vol. v., pt. 2, p. 30.
- 91 ——— A 'Striated Pavement' at Withernsea. *Ibid.*, p. 41.
- 92 ——— East Riding Geological Specimens. *Hull Museum Publications*, No. 7, pp. 13-20.

- 93 SHEPPARD, T.—Note on a nearly complete specimen of *Ichthyosaurus thyresopondylus* from the Kimeridge Clay of Speeton. *Geol. Mag.*, dec. iv., vol. ix., p. 427; *Hull Museum Publications*, No. 10, pp. 1-7.
- 94 ——— Bibliography. North of England Geology and Palæontology. 1899. *Naturalist*, Oct., pp. 317-336.
- 95 ——— Bibliography: A List of the Papers referring to the Geology, etc., of the East of Yorkshire. . . . Published during 1899. *Trans. Hull Geol. Soc.*, vol. 5, pt. 2, pp. 47-48.
- 86 ——— Yorkshire Naturalists at Masham. *Naturalist*, Sept., pp. 293-301.
- 97 ——— Pleistocene Fishes in South East Yorkshire. *Naturalist*, Aug., p. 258.
- 98 ——— [Boulders at] Meaux, near Beverley. *Naturalist*, July, p. 215.
- 99 ——— Round the Hull Museum. Recent Additions. *Hull Museum Publications*. No. 2. 2nd Ed. Pp. 8.
- 100 ——— Recent Additions, etc. Jan. *Hull Museum Publications*, No. 5. pp. 15-16.
- 101 ——— Quarterly Record of Additions. No 1. *Hull Museum Publications*. No. 1. June. Pp. 1-20.
- 102 ——— and J. W. STATHER.—Field Meetings during 1899. *Trans. Hull Geol. Soc.*, vol. v., pt. 2, pp. 32-36.
- 103 SIMPSON, W.—The Physiographical Geology of Shaw Sike. *Halifax Naturalist*, 1902, pp. 81-88.
- 104 SPEIGHT, H.—Lower Wharfedale. Being a complete account of the history, antiquities, and scenery of the picturesque valley of the Wharfe, from Cawood to Arthington. [Brief geological notes]. London. Pp. 532.
- 105 STATHER, J. W.—Ayton [Boulders]. *Trans. Hull Geol. Soc.*, vol. v., pt. 2, p. 30; *Naturalist*, 1902, pp. 214-215.
- 106 ——— Reported by the Boulder Committee of the Hull Geological Society. [Various records in 1899]. *Trans. Hull Geol. Soc.*, vol. v., pt. 2.
- 107 ——— [Boulders at] Leconfield, near Beverley. *Naturalist*, July, pp. 215-216.
- 108 ——— The Bridestones. [Photograph]. *Trans. Hull Geol. Soc.*, vol. v., pt. 2, pp. 45, 46.

- 109 STATHER, J. W.—*Ichthyosaurus thyreospondylus* at Speeton, Yorkshire. *Naturalist*, p. 170.
- 110 ——— A Striated Surface at Sandsend. *Proc. Yorks. Geol. Soc.*, vol. xiv., pt. 3, pp. 484-486.
- 111 ——— [See T. Sheppard].
- 112 STOCKS, H. B.—On the Origin of Certain Concretions in the Lower Coal Measures. [At Halifax and Oldham]. *Quart. Journ. Geol. Soc.*, vol. lviii., pp. 46-58; *Geol. Mag.*, dec. iv., vol. ix., pp. 44, 45.
- 113 SWITHENBANK, J. W.—Rowten Pot. *The Yorks. Ramblers' Club Journ.*, vol. i., No. 9, pp. 316-324.
- 114 WALTON, F. F.—Brandesburton [Boulders]. *Trans. Hull Geol. Soc.*, vol. v., pt. 2, p. 30.
- 115 ——— [Boulders at] Hornsea. *Naturalist*, July, p. 216.
- 116 WALFORD, EDWIN A.—On some Gaps in the Lias. *Quart. Journ. Geol. Soc.*, vol. lviii., May, pp. 267-278; *Abstract in Geol. Mag.*, April, p. 189.
- 117 WATSON, A.—The Tees. [In 'Rivers of Great Britain.' (i.) Rivers of the East Coast. Roy. 4to. London. Pp. 376.
- 118 WATTS, W. W.—Photographs of Geological Interest in the United Kingdom. Twelfth Report of the Committee. *Rep. Brit. Assoc.* (Glasgow), pp. 339-352.
- 119 ——— (edited by).—British Geological Photographs, published in 3 parts by the Geological Photographs Committee of the British Association, 1902-1904.
- 120 WEBER, H.—Mineral Waters. Quain's *Dictionary of Medicine*. Ed. 3. [See 1882].
- 121 WEISS, F. E.—On *Xenophyton radiculosum* Hick, and on a Stigmarian Rootlet probably related to *Lepidophloios fuliginosus* Will. [Siddal, near Halifax]. *Mem. Proc. Manchester Lit. Phil. Soc.*, vol. xlvi., No. 9, pp. 19.
- 122 WELLBURN, E. D.—On the Fish Fauna of the Pendleside Limestones. [Table of Distribution]. *Proc. Yorks. Geol. Soc.*, vol. xiv., pt. 3, pp. 465-473.
- 123 ——— On the genus *Calacanthus* as found in the Yorkshire Coal-Measures, with a restoration of the fish. *Ibid.*, pp. 474-483.
- 124 ——— The part played by the Subsoil or Ground Waters in

- the Causation of Typhoid Fever. [West Riding]. *Public Health*, vol. xiv., No. 11, Aug., pp. 634-638.
- 125 WELBURN, E. D.—[See H. E. Sauvage].
- 126 WHEELER, W. H.—The Sea-coast. (1) Destruction ; (2) Littoral Drift ; (3) Protection. [Yorkshire Coast, pp. 3, 61, 83, 84, 99, 100, 216-238]. Pp. xii., 361. 8vo. *London*. Rev. in *Geol. Mag.*, dec. iv., vol. ix., pp. 276, 277.
- 127 WILLSON, B.—Lost England. The Story of our submerged coasts. [Yorkshire, pp. 11, 62-98]. Pp. 192. 8vo. *London*.
- 128 WOODS, H.—A Monograph of the Cretaceous Lamelli-branchiata of England. Pt. 4. Pectinidæ. [*P. orbicularis*, *P. cinctus*, *P. striatopunctatus*, from Speeton, pp. 151, 155, 159]. Pp. 145-196 ; plates xxvii.-xxxiii. *Monogr. Pal. Soc.*, vol. lvi., for the year 1902.
- 129 ——— Palæontology. Invertebrate. Ed. 3. *Cambridge*. Pp. 388.
- 130 WOODWARD, H.—Life of William Smith, LL.D., the 'Father of English Geology.' *Proc. Bath Nat. Hist. Antiq. Field Club*, vol. x., pp. 1-14.
- 131 WOODWARD, H. B.—Ralph Tate. Obituary. *Quart. Journ. Geol. Soc.*, vol. lviii., pp. lxi., lxii.

## 1903.

- 1 ANON.—Samuel Chadwick. Obituary Notice. *Geol. Mag.*, dec. iv., vol. x., pp. 335, 336.
- 2 ——— The Hull Meeting [of the Yorkshire Naturalists' Union. Excursion to Kelsey Hill]. *Naturalist*, Jan., pp. 22-24.
- 3 ——— An East Coast Erratic [from Kelsey Hill]. *Ibid.*, p. 100.
- 4 ——— Glaciation of the Calder Valley. *Halifax Naturalist*, p. 20.
- 5 ——— The Whinstone and other Road-metal Quarries of the North of England. *Quarry*, vol. viii., pp. 77-82, 141-145. [See also 1902].
- 6 ——— The Yorkshire Chalk. *Naturalist*, July, pp. 227-8.
- 7 ——— Yorkshire Glacier Lakes. *Naturalist*, Jan., pp. 14-16.

- 8 ANON.—Catalogue of the More Important Papers . . . Published during the year ending 31st May, 1902. *Rep. Brit. Assoc.* (Belfast), pp. 877-896.
- 9 ——— British Geological Photographs. *Naturalist*, Feb., p. 36.
- 10 ——— Analyses of British Coals and Coke, collected and compared. *Coll. Guard*, vol. lxxxv., pp. 37-1383 [various], and vol. lxxxvi., pp. 31-1346 [various].
- 11 ——— Analyses and Particulars of British Stone. II. [Robin Hood Quarries, near Wakefield]. *Quarry*, vol. viii., pp. 731-734.
- 12 ——— First Report of the Royal Commission on Coal Supplies. Vol. i., The Report, pp. viii. Vol. ii., Minutes of Evidence and Appendix, pp. 364. Vol. iii., Supplement to the First Report, Plans and Diagrams. Fol. *London*. *Coll. Guard*., vol. lxxxvi., pp. 453, etc.
- 13 ALLANSON-WINN, R. G.—[See R. G. A. Winn].
- 14 ALLEN, H. A.—Catalogue of Types and Figured Specimens of British Gasteropoda and Scaphopoda from the Rhætic Beds, Lias, and Inferior Oolite, preserved in the Museum of Practical Geology, London. [Lias and Inferior Oolite]. *Summary of Progress, Geol. Survey*, for 1902, pp. 217-228.
- 15 ARBER, E. A. NEWELL.—Notes on the Fossil Plants from the Ardwick Series of Manchester. *Mem. and Proc. Manch. Lit. and Phil. Soc.*, vol. xlviii. pt. 1, Mem. ii., pp. 1-32. Abstract in *Geol. Mag.*, Nov., p. 514. [See also *Naturalist*, Feb., pp. 36-37].
- 16 AVEBURY, LORD.—The Scenery of England and the Causes to which it is due. *London*. pp. xxvi.+508.
- 17 BAKER, J. G.—[See W. G. Smith].
- 18 BARNES, J.—The Microscopic Structure of Mountain Limestone. [Yorkshire, etc.]. *Trans. Manchester Mic. Soc. Ann. Rep.* for 1902. Pp. 38-46.
- 19 BAYFORD, E. G.—Beetles in Peat. [*Hydrophilus piceus* at Hatfield Chase]. *Naturalist*, Oct., pp. 407, 408.
- 20 BELINFANTE, L. L. [edited by].—Geological Literature added to the Geological Society's Library during the year ending December 31st, 1902. *London*. Pp. 113.
- 21 BLASHILL, T.—Evidences relating to the Eastern Part of the



- City of Kingston-upon-Hull. Pp. 83. 8vo. *Hull*.  
 [And *Trans. Hull Field Nat. Club*, vol. iii., pp. 42-97].
- 22 BROWN, G. H.—The Ebbing and Flowing Well, Giggleswick.  
*Settle*. Pp. 1-32.
- 23 ——— Victoria Cave: Its History and Exploration.  
*Settle*. [1903], pp. 1-32.
- 24 CARTER, W. LOWER.—Classified Index of the Yorkshire  
 Geological and Polytechnic Society. Vols. i.-xiv., 1839-  
 1902. *Proc. Yorks. Geol. and Polyt. Soc.*, vol. xv., pt. 1,  
 pp. 96-153.
- 25 ——— Secretary's Report, 1902. *Proc. Yorks. Geol. and*  
*Polyt. Soc.*, vol. xv., pt. 1, pp. 162-180.
- 26 CLARK, J. E.—Lake Pickering. *The Friend*, Jan., pp. 8-10.
- 27 CLOUGH, C. T.—The Disappearance of Limestones in High  
 Teesdale. *Geol. Mag.*, dec. iv., vol. x., pp. 259-262.
- 28 COLE, E. MAULE.—[Boulder at] Carnaby. *Naturalist*  
 March, p. 73 and p. 75.
- 29 CORBETT, H. H.—Glacial Geology of the Neighbourhood of  
 Doncaster. *Naturalist*, Feb., pp. 47-50; map.
- 30 CROFTS, W. H.—Notes on the Alexandra Dock Extension.  
*Trans. Hull Geol. Soc.*, vol. v., pt. 3, pp. 57-62.
- 31 CUDWORTH, W.—Carboniferous Vegetation at Bradford.  
*Naturalist*, July, pp. 266, 267.
- 32 CUTTRISS, S. W.—Gaping Ghyll Hole. *The Yorkshire*  
*Ramblers' Club Journ.*, vol. i., pp. 48-51.
- 33 DAKYNS, J. R.—Note on the Millstone Grits of Grassington  
 Moor. *Geol. Mag.*, dec. iv., vol. x., pp. 223-225.
- 34 ——— Notes on the Glacial Phenomena of part of Wharfe-  
 dale, near Grassington, from my M.S. written in 1878.  
*Proc. Yorks. Geol. and Polyt. Soc.*, vol. xv., pt. 1, pp.  
 52-58.
- 35 DWERRYHOUSE, A. R.—The Movements of Underground  
 Waters of North-west Yorkshire. Third Report of the  
 Committee. *Rep. Brit. Assoc.* for 1902, pp. 224-229;  
*Proc. Yorks. Geol. Soc.*, vol. xv., pt. 1, pp. 171-178, 189.
- 36 [ELSDEN, J. V.].—The Whinstone and other Road-metal  
 Quarries of the North of England. *Quarry*, vol. viii.,  
 pp. 77-82, 83-145.
- 37 ——— The Weathering of Building Stone in London. *Ibid.*,  
 pp. 589-595.

- 38 FLETCHER, J. S.—A Picturesque History of Yorkshire. *London*. 6 vols. 8vo. 2nd Ed. [See under 1899].
- 39 GEIKIE, A.—Text-Book of Geology. Ed. 4, 2 vols., pp. xxi.+1472. 8vo. *London*. [See 1882].
- 40 GREEN, J. A.—Early Explorations in Ingleborough Cave. *The Yorks. Ramblers' Club Journ.*, vol. i., pp. 52-63.
- 41 GREGSON, W.—[Boulders at] Aldfield. *Naturalist*, March, p. 53.
- 42 H[ARKER], A.—Mineralogy by H. A. MIERS. [Review of]. *Ibid.*, July, pp. 260-261.
- 43 HARRISON, W. JEROME.—A Text Book of Geology. 5th Ed. Pp. 8+350.
- 44 HAWELL, J.—The Evolution of Cleveland Scenery. *Proc. Cleveland Nat. Field Club*, for 1901, pp. 176-195.
- 45 ——— An Oolitic Plant Bed in North Cleveland. [Marske]. *Naturalist*, pp. 312-317; and *Proc. Cleveland Nat. Field Club*, for 1902, pp. 229-234.
- 46 H[AWELL], J.—Geological Rambles in East Yorkshire, by T. SHEPPARD. [Review of]. *Naturalist*, July, pp. 257-259.
- 47 HAWKESWORTH, E.—Yorkshire Naturalists at Cowthorpe. [Notices of gravel ridges in the Vale of York, pp. 199-200]. *Ibid.*, June.
- 48 HEY, W. C.—Boulders at Ayton. [Shap Granite]. *Ibid.*, Nov., p. 440.
- 49 HILL, W.—[See A. J. Jukes-Browne]
- 50 HIND, W.—Note on some Dictyonema-like Organisms from the Pendleside Series of Pendle Hill and Poolvash. *Abs. Proc. Geol. Soc.*, 1902-1903, p. 80; *Geol. Mag.*, dec. iv., vol. x., p. 237.
- 51 ——— Life-zones in the British Carboniferous Rocks. Report of the Committee. *Rep. Brit. Assoc.* for 1892, pp. 210-216.
- 52 ——— A Monograph of the British Carboniferous Lamelli-branchiata. Vol. ii., pts. 2 and 3. [Yorkshire, pp. 41, 45, 53, 56, 63, 66, 71, 81, 82, 88, 89, 90, 94, 95, 97, 103, 105, 115, 122]. Pp. 35-124; plates vii.-xxi. *Monogr. Pal. Soc.*, vol. lvii., for the year 1903.

- 53 HOWARTH, J. H.—Notes on some Boulder Markings on Mr. Kendall's Map of the Glacier Lakes in the Cleveland Hills. *Proc. Yorks. Geol. and Polyt. Soc.*, vol. xv., pt. 1, pp. 46-51.
- 54 ——— [Boulders at] Langcliffe. *Naturalist*, March, p. 86.
- 55 ——— [See P. F. Kendall].
- 56 ——— [See W. Simpson].
- 57 I'ANSON, J. C.—The Whinstone and other Road Metal Quarries of the North of England. *The Quarry*, vol. viii., pp. 78-83, and 141-145 (map).
- 58 JUKES-BROWNE, A. J., with contributions by W. HILL.—The Cretaceous Rocks of Britain. Vol. ii. The Lower and Middle Chalk of England. Pp. 13+568. [Yorkshire, pp. 226, 283, 307, 485]. *Memoirs of the Geological Survey*. 8vo. London.
- 59 KENDALL, P. F.—Scottish Rocks in East Yorkshire [Trachytic boulders at Kelsey Hill]. *Naturalist*, March p. 71.
- 60 ——— [Seventh] Report . . . on Erratic Blocks. [Aldfield, Escrick, Coxwold, Kilburn, p. 254]. *Rep. Brit. Assoc. for 1902*, pp. 252-258.
- 61 ——— [Boulder at] Escrick. *Naturalist*, March, p. 73.
- 62 ——— The Glacier Lakes of Cleveland. *Proc. Yorks. Geol. and Polyt. Soc.*, vol. xv., pt. 1, pp. 1-39 (maps).
- 63 ——— Supplementary Observations on the Glacier Lakes of Cleveland. *Loc. cit.*, pp. 40-45.
- 64 ——— Glacier Lakes in the Cleveland Hills. *Naturalist*, Jan., pp. 14-16.
- 65 ——— [See W. G. Smith].
- 66 ——— and J. H. HOWARTH.—The Yorkshire Boulder Committee and its Sixteenth Year's Work, 1901-1902. [Aldfield, Coxwold, Kilburn]. *Naturalist*, March, pp. 72-77.
- 67 LAMPLUGH, G. W.—Belemnites of the Faringdon 'Sponge Gravels.' [Fossils compared with those of Speeton]. *Geol. Mag.*, dec. iv., vol. x., pp. 32-34.
- 68 ——— Land Shells in the Infra-Glacial Chalk Rubble at Sewerby, near Bridlington Quay. *Proc. Yorks. Geol. and Polyt. Soc.*, vol. xv., pt. 1, pp. 91-95. Abstract in *Geol. Mag.*, Nov., p. 513.

- 69 LOMAX, J.—On the Occurrence of the Nodular Concretions (Coal Balls) in the Lower Coal-Measures. [Halifax Hard Bed]. *Rep. Brit. Assoc.* for 1902, pp. 811, 812.
- 70 LOWE, G. T.—Alum Pot. *The Yorks. Ramblers' Club Journ.*, vol. i., No. 5, pp. 35-47.
- 71 MARR, J. E.—Agricultural Geology. Pp. xi., 318. 8vo. *London*.
- 72 MACTURK, G. W. B.—[Boulders at] Bluestone Bottoms. *Naturalist*, March, p. 75.
- 73 MIERS, H. A.—[See A. H[arker].
- 74 MONCKTON, H. W.—A Summary of the Principal Changes in South-East England during Pliocene and more Recent Times. [Refers to the Hessle Clay]. *Rep. Brit. Assoc.* for 1902, pp. 616, 617.
- 75 MOSS, C. E.—[See W. G. Smith].
- 76 MUFF, H. B.—[Boulders at] Robin Hood's Bay. *Naturalist*, March, p. 74.
- 77 OLIVER, F. W.—On the Identity of *Sporocarpon ornatum* Williamson, and *Lagenostoma physoides* Williamson. [Halifax Coal-Measures]. *New Phytologist*, vol. ii., No. 1, Jan., pp. 18, 19.
- 78 ——— and D. H. SCOTT.—On *Lagenostoma Lomaxi*, the Seed of *Lyginodendron* [Yorkshire Specimens]. *Annals of Botany*, vol. xvii., pp. 625-629.
- 79 POLLARD, W.—Analysis of Phosphatic Nodules. [From the Carboniferous Limestone (Yoredale) Series of Yorkshire and Westmorland]. *Summary of Progress, Geol. Survey*, for 1902, pp. 56, 57.
- 80 RANKIN, W. MUNN.—[See W. G. Smith].
- 81 RHODES, J.—Notes on the Occurrence of Phosphatic Nodules and Phosphate-bearing Rock in the Upper Carboniferous Limestone (Yoredale) Series of the West Riding of Yorkshire and Westmorland Border. *Summary of Progress of the Geological Survey* for 1902, p. 56. Also *Rep. Brit. Assoc.* for 1901, p. 655.
- 82 RICHARDSON, H.—Sea Sand. [Experiments at Bootham School with sand from the Yorkshire Coast]. *Ann. Rep. Yorks. Phil. Soc.* for 1902, pp. 43-58.
- 83 ROBINSON, J. F.—[Boulders at] Wawne. *Naturalist*, p. 75.
- 84 SCOTT, D. H.—[See F. W. Oliver].

- 85 SEWARD, A. C.—On the Occurrence of *Dictyozamites* in England, with remarks on European Mesozoic Floras. [From the Lower Estuarine beds of Marske]. *Quart. Journ. Geol. Soc.*, vol. lix., pp. 217-233; *Naturalist*, p. 227.
- 86 — Floras of the Past. Their Composition and Distribution. [Presidential Address to the Botanical Section of the Brit. Assoc. at Southport, 1903]. *Geol. Mag.*, dec. iv., vol. x., pp. 504-512, 555-563; *Rep. Brit. Assoc.* for 1903, pp. 824-849.
- 87 SHEPPARD, T.—Beavers in East Yorkshire. [From peat beds in Holderness]. *Naturalist*, July, p. 109.
- 88 — Mammoth Tusk at Brough. [From the gravels of Mill Hill]. *Ibid.*, p. 194.
- 89 — Hull's Contribution to Science. [History of the progress of science in the town]. *Ibid.*, June, July, Aug., pp. 217-220, 233-240, 307-312.
- 90 — Yorkshire Naturalists at Filey. [Geological notes, p. 243]. *Ibid.*, pp. 241-251.
- 91 — Yorkshire Naturalists at Goathland. [Brief geological notes]. *Ibid.*, pp. 300-303.
- 92 — High Force, Teesdale. [Description of photograph]. *Ibid.*, pp. 321, 322.
- 93 — Yorkshire Naturalists at Bowes. [Photograph showing Pot-holes in the Trough, Sleightholme Beck]. *Ibid.*, pp. 353-369.
- 94 — Yorkshire Naturalists at Wharnccliffe. [Brief geological notes]. *Ibid.*, pp. 397-402.
- 95 — An Extinct Monster. [Tusk of *Elephas* from Brough]. *Ibid.*, pp. 8-10.
- 96 — A Local Relic of the Ice Age. [Boulder from Burstwick]. *Ibid.*, pp. 11-13.
- 97 — Model of Flamborough Headland. [Showing Chalk Zones]. *Ibid.*, pp. 18, 19.
- 98 — Geological Rambles in East Yorkshire. Pp. 247. 8vo. London. Reviewed by J. H[awell]. *Ibid.*, July, pp. 257-259.
- 99 — [not signed].—A New Yorkshire Fossil [*Dictyozamites*]. *Ibid.*, July, p. 227.

- 100 SHEPPARD, T.—Bibliography for 1900. [East Yorkshire and North Lincolnshire]. *Trans. Hull Geol. Soc.*, vol. v., pt. 3, pp. 65-66.
- 101 ——— Geology at the British Association. *Naturalist*, Nov., p. 447.
- 102 ——— [Boulders at] Easington. *Ibid.*, March, p. 75.
- 103 ——— Shap Granite [and] *Rhomb-porphry* [in the] Burstwick Gravel Pits, Holderness. *Trans. Hull Geol. Soc.*, vol. v., pt. 3, p. 50.
- 104 ——— Some local Borings [at Dairycoates and Hedon]. *Ibid.*, pp. 62-65.
- 105 ——— Bibliography, North of England . . . Geology and Palæontology, 1900, *Naturalist*, April, pp. 141-160, 1901. *Naturalist*, Oct., pp. 413-416 ; Dec., pp. 463-473.
- 106 ——— and J. W. STATHER.—Field Meetings during 1900 [to Flamborough, Skipsea, Scarborough, Kiplingcotes, Hedon, Speeton, Brough] *Ibid.*, pp. 51-57.
- 107 SIMPSON, W.—Borings at Halifax. *Halifax Naturalist*, p. 47 ; *Water*, vol. v., p. 276 ; *Proc. Yorks. Geol. Soc.*, vol. xv., pt. 1, pp. 79-90. [See 1904].
- 108 ——— Geology. [Report of Recorder for 1902]. *Halifax Naturalist*, p. 110.
- 109 ——— Records and Comparison of three deep Borings in the Millstone Grit at Halifax. *Proc. Yorks. Geol. and Polyt. Soc.*, vol. xv., pt. 1, pp. 79-90.
- 110 ——— and J. H. HOWARTH.—[Boulders at] Mytholmroyd. *Naturalist*, March, pp. 76-77.
- 111 SMITH, W. G.—Botanical Survey for Local Naturalists' Societies. [Brief Geological Notes]. *Naturalist*, Jan., pp. 5-13.
- 112 ——— and C. E. MOSS.—Geographical Distribution of Vegetation in Yorkshire. Pt. 1. Leeds and Halifax District. [Geological notes by P. F. KENDALL]. *Geog. Journ.*, vol. xxi., pp. 375-401 ; Map, p. 484, also pp. 27. 8vo. Reviewed by J. G. BAKER ; *Naturalist*, June, pp. 221-223.
- 113 ——— and W. MUNN RANKIN.—Geographical Distribution of Vegetation in Yorkshire. Pt. 2. Harrogate and Skipton District. [With sketch of the geology of the district by P. F. KENDALL]. *Geog. Journ.*, vol. xxii., pp. 149-178 and map, p. 236 ; Summary in *Scot. Geog.*

- Mag.*, vol. xix., pp. 417-422. [See also *Naturalist*, Sept., pp. 377-379].
- 114 SPEIGHT, H.—Beavers in Yorkshire [on the evidence of place names]. *Naturalist*, April, pp. 108, 109.
- 115 STATHER, J. W.—[East Riding] Boulder Committee's Report, August 1900. *Trans. Hull Geol. Soc.*, vol. v., pt. 3, p. 50.
- 116 ——— Glacial Problems in Yorkshire and Lincolnshire. *Naturalist*, Nov., pp. 422, 423.
- 117 ——— [Boulders at] Burstwick. *Naturalist*, March, pp. 75-76.
- 118 ——— [See T. Sheppard].
- 119 STIRRUP, M.—Cave Phenomena. [Report of a Lecture]. *Proc. Manchester Field Club*, vol. i., pt. 1, for 1899, pp. 60-64.
- 120 STRANGWAYS, C. FOX.—Excursion [of the Leicester Lit. and Phil. Society] to Scarborough. Pp. 17.
- 121 STYLE, GEORGE.—[Boulders at] Giggleswick. *Naturalist*, March, p. 76.
- 122 SUTCLIFFE, R.—Erratic and Water-worn Stones found in Fire-clay in the Hartley Colliery Bank, Horbury. *Trans. Manchester Geol. Soc.*, vol. xxviii., pp. 229-231.
- 123 TRAQUAIR, R. H.—On the Distribution of Fossil Fish-remains in the Carboniferous Rocks of the Edinburgh District. [Yorkshire, pp. 705, 706]. *Trans. Roy. Soc., Edinburgh*, vol. xl., pp. 687-708.
- 124 WALTON, F. F.—[Boulders at] Aldbrough. *Naturalist*, March, p. 76.
- 125 WATTS, W. W.—Photographs of Geological Interest in the United Kingdom. Thirteenth Report of the Committee. *Rep. Brit. Assoc.* for 1902, pp. 229-247.
- 126 ——— (edited by).—British Geological Photographs, published in 3 parts by the Geological Photographs Committee of the British Association, Issue ii., July, 1903.
- 127 WELLBURN, E. D.—A List of the Fish Fauna of the Pendle-side Limestones, with Remarks on the Evidence which may be adduced from such List in support of the Systematic Position of the Rocks. *Rep. Brit. Assoc.* for 1903, pp. 222-224.
- 128 ——— On some New Species of Fossil Fish from the Mill-

- stone Grit Rocks, with an Amended List of the Genera and Species. *Proc. Yorks. Geol. and Polyt. Soc.*, vol. xv., pt. 1, pp. 70-78.
- 129 WHEATON, S. W.—Report on Water Supplies in the Norton Rural District. Pp. 7. *Local Government Board Report* (No. 184). Fol. London.
- 130 WINN, R. G. A.—Foreshore Protection and Deep-sea Erosion. [Holderness Coast]. *Engineering*, vol. lxxvi., pp. 128, 129. Under different title in *Naturalist*, 1894, pp. 305-308.
- 131 WOODS, H.—A Monograph of the Cretaceous Lamelli-branchiata of England. Vol. v. Introduction, Bibliography and Index. *Monogr. Pal. Soc.*, vol. lvii., for the year 1903.
- 132 W[OODWARD], H.—The Rev. Thomas Wiltshire, M.A., D.Sc., etc. [obituary notice]. *Geol. Mag.*, Jan., pp. 46-48.
- 1904.
- 1 ANON.—Eminent Living Geologists. Wilfred Hudleston Hudleston, J.P., M.A., F.R.S., F.L.S., F.G.S., F.C.S., etc. *Geol. Mag.*, dec. v., vol. i., pp. 431-438.
- 2 ——— *Calamites cannæformis*. [Sketch from Undercliffe Millstone Grit Quarry, Bradford]. *Trans. Weardale Nat. Field Club*, vol. i., pt. 2, 1894, plate vi.
- 3 ——— Stone Quarrying. [Yorkshire Sandstone and Magnesian Limestone]. *Quarry*, vol. ix., pp. 201-205.
- 4 ——— Observations on Changes in the Sea Coast of the United Kingdom. Report of the Committee . . . [Yorkshire, pp. 260-262]. *Rep. Brit. Assoc.* for 1903, pp. 258-281.
- 5 ——— Second Report of the Royal Commission on Coal Supplies. Vol. i., the Report, pp. v.; Vol. ii., Minutes of Evidence and Appendices, pp. 419; Vol. iii., Supplement to the Second Report. Plans, etc. Fol. London.
- 6 ——— [J. V. CLODEN].—Ingleton Granite Quarries. *Quarry*, vol. ix., pp. 519-521, 567-569. Map and Sections.
- 7 ——— [F. W. OLIVER].—An Exhibit of Specimens of Seed-bearing Plants from the Palæozoic Rocks. [Cordaïtes from Barnsley]. *New Phytologist*, vol. iii., pp. 176-180.



- 8 ALLANSON-WINN, R. G.—[See R. G. A. Winn.].
- 9 ALLEN, H. A.—Catalogue of Types and Figured Specimens of British Gasteropoda and Scaphopoda from the Lower, Middle and Upper Oolites preserved in the Museum of Practical Geology, London. *Summary of Progress of the Geological Survey* for 1903, pp. 175-187.
- 10 AVEBURY, LORD.—The Scenery of England and the Causes to which it is due. *London*.
- 11 BATHER, F. A.—[See E. Ray Lankester].
- 12 BLASHILL, T.—Changes in Spurn Point and their Bearing on the Site of Ravenser. *Naturalist*, pp. 264-268.
- 13 BOGG, E.—Two Thousand Miles in Wharfedale: a descriptive account of the History, Antiquities, Legendary Lore, Picturesque Features and Rare Architecture of the Vale of the Wharfe, from Tadcaster to Cam Fell. [Geology, pp. 9, 59, 66, 113, 145, 348, 445, 453, 472, 486, 487, 494, 495, 547, 567, 599, 636]. Pp. xxxii., 636. 8vo. *London, Manchester, York, Leeds*.
- 14 BRODRICK, H.—British Caves. [Abstract. Yorkshire Carboniferous Limestone]. *Proc. Liverpool Geol. Soc.*, vol. ix., pt. 4, pp. 354-358.
- 15 BROUGH, B. H.—The Mining of Non-metallic Minerals. [Yorkshire Sandstone and Limestone, p. 153]. *Journ. Soc. Arts*, vol. lii., pp. 113-122, 139-148, 152-163, 167-179. *Quarry*, vol. ix., pp. 201-205, 270-273.
- 16 BROWN, GEO. H.—The Ebbing and Flowing Well, Giggleswick. Ed. 2. *Settle*. [1904]. Pp. 1-32.
- 17 BUCKMAN, S. S.—Jurassic Brachiopoda. [*Terebratula sarthacensis* d'Orb, p. 394]. *Ann. Mag. Nat. Hist.*, ser. vii., vol. xiv., pp. 389-397.
- 18 BUTTERFIELD, A. E.—Notes on the Growth of Spurn. *Naturalist*, pp. 325-328.
- 19 CARTER, W. L.—River Capture in the Don System. *Geol. Mag.*, dec. v., vol. i., pp. 544-546; *Rep. Brit. Assoc.* for 1904, pp. 558, 559.
- 20 — The Glaciation of the Don and Dearne Valleys. *Geol. Mag.*, dec. v., vol. i., pp. 546-551; *Rep. Brit. Assoc.* for 1904, pp. 565-569.
- 21 — Secretary's Report, 1902. [Excursion to the East Yorkshire Moors. Underground Water Committee's Re-

- port]. *Proc. Yorks. Geol. Soc.*, vol. xv., pt. 1, pp. 162-180.
- 22 CLODEN, J. V.—[See Anon].
- 23 CRICK, G. C.—Note on a Remarkable Belemnoid from the Chalk of Flamboro' Head. [Appendix A. to Dr. Rowe's paper]. *Proc. Geol. Assoc.*, vol. xviii., pt. 4, pp. 283-285; *Naturalist*, pp. 134, 135.
- 24 ——— Description of a Nautiloid, *Pleuromutilus pulcher*, n. sp., from the Carboniferous Rocks of England. [Hebden Bridge]. *Proc. Malacological Soc.*, vol. vi., pp. 15-20, 272. [See also 1906].
- 25 CROSSLAND, C.—[See W. B. Crump].
- 26 CRUMP, W. B., and C. CROSSLAND.—The Flora of the Parish of Halifax. [Geological Features, pp. x.-xiv.]. Pp. lxxv. 316. 8vo. *Halifax*.
- 27 DAKYNS, J. R.—Note on the Glacial Phenomena of part of Wharfedale, near Grassington, from my MS. written in 1878. *Proc. Yorks. Geol. Soc.*, vol. xv., pt. 1, pp. 52-58.
- 28 DAVIES, A. M., and W. G. TYNDALE. Purification [of Water] on Chalk Soils. *Water*, vol. vi., pp. 477-479
- 29 DAVISON, C.—On Some Minor British Earthquakes of the Years 1901-1903. [Hessle]. *Geol. Mag.*, dec. iv., vol. i., pp. 435-542; *Naturalist*, 1905, pp. 35, 36.
- 30 DAWKINS, W. B.—Note on the effect of Relaxation of Pressure in causing Folds at the Bottom of Valleys. [Langsett and Derwent Reservoirs]. *Mem. Proc. Manchester Lit. Phil. Soc.* vol. xlix. (1904-5), pp. vii., viii. *Water*, vol. vi., p. 491; *Geol. Mag.*, dec. v., vol. i., pp. 618, 619
- 31 DWERRYHOUSE, A. R.—The Movement of Underground Waters of North-west Yorkshire. Fourth Report of the Committee. *Rep. Brit. Assoc.* for 1903, pp. 192-197. [See also W. L. Carter].
- 32 FARRAR, R.—Report to the Local Government Board on the Sanitary Circumstances and Administration of the Borough of Beverley, with special reference to the recent Prevalence of Enteric Fever and Diarrhœa in the Borough. Pp. 16. *Local Government Board Report* (No. 205). Fol. London.

- 33 FLETCHER, J. S.—A Picturesque History of Yorkshire.  
*London*. 6 vols. 8vo. Ed. 2. [See under 1899].
- 34 FLETCHER, L.—[See E. Ray Lankester].
- 35 FORD, L. P.—Building Stones, Natural and Artificial.  
[Analysis of stone from Huddlestone]. *Journ. Soc. Arts.*, vol. lii., pp. 384-390. Discussion, pp. 390-393.
- 36 FOX-STRANGWAYS, C.—The Geology of the Oolitic and Cretaceous Rocks South of Scarborough. (Explanation of Sheets 54 and 55 New Series; 95 S.W. and 95 S.E. Old Series). *Memoirs of the Geological Survey*. Ed. 2. Pp. viii., 19. 8vo. *London*. Reviewed in *Naturalist*, pp. 81-83; *Geol. Mag.*, dec. v., vol. i., 470, 471.
- 37 ——— [Excursion of the Leicester Lit. Phil. Soc. to Scarborough in 1903]. *Trans. Leicester Lit. Phil. Soc.*, vol. viii., pp. 64-69.
- 38 GALLOWAY, R. L.—Annals of Coal Mining and the Coal Trade. Second Series. Pp. xiii. 409. 8vo. *London*. See 1908.
- 39 GREGORY, E. E.—Observations on the Glacial Geology of Settle District. *Bradford Sci. Journ.*, pp. 51-53.
- 40 HARRISON, W. J.—Geology [of Yorkshire, West Riding]. *Kelly's Post Office Directory of West Riding of Yorkshire*, pp. 23-28. 4to. *London*.
- 41 HAWKESWORTH, E.—Yorkshire Naturalists at Hebden Bridge. [Geological Notes]. *Naturalist*, pp. 199, 200.
- 42 HEALEY, Miss M.—Notes on Upper Jurassic Ammonites with special reference to Specimens in the University Museum, Oxford, No. 1. *Quart. Journ. Geol. Soc.*, vol. lx., pp. 54-64.
- 43 HEY, W. C.—A Description of the Ground Excavated in laying the Water mains at East and West Ayton, near Scarborough. *Ann. Rep. Yorks. Phil. Soc.*, for 1903, pp. 84-88.
- 44 HIND, W.—On the Homotaxial Equivalents of the Lower Culm of North Devonshire. [Yorkshire beds noted]. *Geol. Mag.*, dec. v., vol. i., pp. 392-403, 584-587.
- 45 ——— Life-Zones in the British Carboniferous Rocks. Report of the Committee. [Section in Upper Teesdale]. *Rep. Brit. Assoc.* for 1903, pp. 185-192.
- 46 ——— A Monograph of the British Carboniferous Lamelli-

- branchiata, Vol. ii., part 2, pp. 125-216, plates xxii.-xxv. [Yorkshire specimens, pp. 136, 139, 143, 158; Table of synonyms, p. 165]. *Monogr. Pal. Soc.*, vol. lviii., pp. 125-216, plates xxii.-xxv.
- 47 HINDE, G. J.—On the Structure and Affinities of the Genus *Porosphaera* Steinmann. [*Millepora globularis* Phillips]. *Journ. Roy. Mic. Soc.*, pp. 1-25. *Naturalist*, p. 160.
- 48 HOME, G.—Yorkshire Coast and Moorland Scenes painted and described by Gordon Home. [Brief geological notes]. Pp. x., 148. Map of N.E. Yorkshire. 4to. *London*. Notices in *Naturalist*, p. 220, and 1905, pp. 290, 291.
- 49 HOWARTH, J. H.—Notes on a Section exposed at Copley. [Glacial beds]. *Halifax Naturalist*, p. 91.
- 50 ——— Notes on Boulder Markings on Mr. Kendall's Map of the Glacier Lakes in the Cleveland Hills. [Vale of York]. *Proc. Yorks. Geol. Soc.*, vol. xv., pt. 1, pp. 46-51.
- 51 ——— [See P. F. Kendall].
- 52 JOHNS, C.—Yorkshire Naturalists at Buckden. [Geological report]. *Naturalist*, pp. 272-274.
- 53 JUKES-BROWNE, A. J.—The Cretaceous Rocks of Britain. Vol. iii. The Upper Chalk of England. [Yorkshire, pp. 275-289, 368, 413, 414, 417]. *Memoirs of the Geological Survey*. Pp. x. 566. 8vo. *London*. Reviewed in *Naturalist*, pp. 133, 134.
- 54 KAYE, J. R.—Report of the County Medical Officer on the Water-Supplies derived or derivable from the New Red Sandstone Formation in the West Riding. [Newton on Ouse, p. 14. Geological Map]. Fol. *Wakefield*. Abstract in *Water*, vol. vi., p. 168.
- 55 KENDALL, P. F.—Eighth Report . . . on Erratic Blocks. [Yorkshire, pp. 233-236, 251-258]. *Rep. Brit. Assoc.* for 1903, pp. 231-258.
- 56 ——— On the Geological Structure of South-East Yorkshire. Pp. 15. *Trans. Brit. Assoc. Waterworks Eng.*, vol. ix., pp. 168-183.
- 57 ——— The Glacial Lakes of Cleveland. *Proc. Yorks. Geol. Soc.*, vol. xv., pt. 1, pp. 1-39.
- 58 ——— Supplementary Observations on the Glacier Lakes of Cleveland. *Ibid.*, pp. 40-45.

- 59 KENDALL, P. F. and J. H. HOWARTH.—The Yorkshire Boulder Committee and its Seventeenth Year's Work, 1902-1903. [Vale of Mowbray, Flaxby, Brompton]. *Naturalist*, pp. 13-18.
- 60 — W. G. S[MITH] and T. W. W[OODHEAD].—Committee for Suggestions for Research. [Investigation of Peat Deposits suggested]. *Naturalist*, pp. 137-141.
- 61 LAMPLUGH, G. W.—Land-Shells in the Infra-Glacial Chalk Rubble at Sewerby near Bridlington Quay. *Proc. Yorks. Geol. Soc.*, vol. xv., pt. 1, pp. 91-95; *Geol. Mag.*, dec. iv., vol. x., p. 513; *Rep. Brit. Assoc. for 1903*, p. 659.
- 62 — Bridlington Crag. [New section]. *Geol. Mag.*, dec. v., vol. 1., p. 217.
- 63 — Note on Lower Cretaceous Phosphatic Beds and their Fauna. *Ibid.*, pp. 551, 552.
- 64 — Pluvial Denudation in Yorkshire. [Langtoft]. *Nat.*, pp. 194, 195.
- 65 — Note on the Conditions of Accumulation of the Yorkshire Chalk as shewn by the state of preservation of the Fossils. Appendix C. to A. W. Rowe's paper, which see.
- 66 LANKESTER, E. RAY.—The History of the Collections contained in the Natural History Departments of the British Museum. 2 vols. 8vo. *London*. [The Geological and Mineralogical Sections (vol. i., pp. 197-442) written by Arthur Smith Woodward, Henry Woodward, F. A. Bather and L. Fletcher. Many Yorkshire Collections are referred to].
- 67 LEE, M.—Yoredale Rocks and their Commercial Products. *Trans. Weardale Nat. Field Club*, vol. i., pt. 2, pp. 151-159.
- 68 LEWIS, F. G.—Geographical Distribution of Vegetation of the Basins of the Rivers Eden, Tees, Wear and Tyne. Part 1. [Geology, pp. 315, 316]. *Geographical Journ.* vol. xxiii., pp. 313-331. Part 2, geology, pp. 268, 269]. *Ibid.*, vol. xxiv., pp. 267-285.
- 69 LINDSEY, C. R.—Note on the occurrence of Brookite in the Cleveland Ironstone. [Upleatham]. *Min. Mag.*, vol. xiv., pp. 96-98; *Naturalist*, p. 228.
- 70 MILL, H. R.—England and Wales viewed geographically.

- [Influence of geological structure noticed]. *Geograph. Journ.*, vol. xxiv., pp. 621-636. Map, p. 708.
- 71 MONCKTON, H.W.—On some Examples of the Different Types of Geological Deposits. [References to Yorkshire, etc.]. *Proc. Geol. Assoc.*, vol. xviii., pt. 7, pp. 351-374.
- 72 MOSS, C. E.—Peat Moors of the Pennines: their Age, Origin and Utilization. *Geograph. Journ.*, vol. xxiii., pp. 660-671; *Rep. Brit. Assoc.* for 1893, p. 727.
- 73 OLIVER, F. W.—[See Anon.].
- 74 ——— and D. H. SCOTT.—On the Structure of the Palæozoic Seed *Lagenostoma lomaxi*, with a Statement of the Evidence upon which it is referred to *Lyginodendron*. *Phil. Trans.*, vol. cxcvii., Series B., pp. 193-247; *Proc. Roy. Soc.*, vol. lxxiii., pp. 4, 5.
- 75 [PARKINSON, J.].—Observations on Changes in the Sea Coast of the United Kingdom. Report of the Committee. [Yorkshire, pp. 260-262]. *Rep. Brit. Assoc.* for 1903, pp. 258-281; *Naturalist*, pp. 49-53.
- 76 PETCH, T.—The Published Records of the Land and Fresh Water Mollusca of the East Riding, with Additions. [Includes records from the lacustrine deposits]. *Trans. Hull Field Nat. Club*, vol. iii., pt. 2, pp. 121-172.
- 77 REYNOLDS, J. B.—Regional Geography. The British Isles. [Yorkshire, pp. 58-62]. Pp. 128. 8vo. London.
- 78 ROBINSON, J. F.—The East Riding: an Appreciation. [Brief geological notes]. *Hull and East Riding Teacher*. March and April, 1904.
- 79 ROBINSON, W.—Yorkshire Naturalists at Dent. [Geological report]. *Naturalist*, pp. 299-301.
- 80 ROWE, A. W.—The Zones of the White Chalk of the English Coast. The Maps and Cliff Sections by C. DAVIES SHERBORN. iv.—Yorkshire. *Proc. Geol. Assoc.*, vol. xviii., pt. 4, pp. 193-296. Appendices by G. C. CRICK, C. D. SHERBORN and G. W. LAMPLUGH. Index by C. D. SHERBORN, vol. xviii., pt. 7, pp. 375-384. See also *Naturalist*, pp. 203-207; *Geol. Mag.*, dec. v., vol. i., pp. 228-234; vol. v., pp. 175, 176.
- 81 SCOTT, D. H.—Germinating Spores in a Fossil Fern-sporangium [In Calcareous Nodules from the Lower Coal-

- measures, Yorkshire]. *New Phytologist*, vol. iii., No. 1, pp. 18-23.
- 82 SCOTT, D. H.—[See F. W. Oliver].
- 83 SEWARD, A. C.—Catalogue of the Mesozoic Plants in the Department of Geology, British Museum (Natural History). The Jurassic Flora, Part 2. Liassic and Oolitic Floras of England (including the Inferior Oolite Plants of the Yorkshire Coast). Pp. xv., 192. 8vo. *London*.
- 84 SHEPPARD, T.—Quartzite Pebbles on the Yorkshire Wolds. [In Sand-pipes, etc.]. *Naturalist*, pp. 54-56.
- 85 ——— The Sheffield Meeting of the Yorkshire Naturalists' Union. [Fossil Forest at Wadsley]. *Ibid.*, pp. 79, 80.
- 86 ——— Remains of the Bear in East Yorkshire. [From Bridlington]. *Ibid.*, pp. 142-143.
- 87 ——— Yorkshire Naturalists at Harwood Dale, 21st -23rd May. [Glacial Mound near Lindhead Barn]. *Ibid.*, pp. 179-188.
- 88 ——— Yorkshire Naturalists at Spurn. [View of Spurn Head]. *Ibid.*, 233-238.
- 89 ——— Remains of the Lion in East Yorkshire. [From Hornsea and Bielsbeck]. *Ibid.*, pp. 102-104; *Hull Museum Publications*, No. 20, pp. 26-28.
- 90 ——— Yorkshire Naturalists at Farnley. [Geological notes]. *Ibid.*, pp. 238-240.
- 91 ——— Yorkshire Naturalists at Buckden. [Geological notes]. *Ibid.*, pp. 271-280.
- 92 ——— Yorkshire Naturalists at Dent. [Geological notes]. *Ibid.*, pp. 299-304.
- 93 ——— Walrus Remains in Holderness. [At Kelsey Hill]. *Ibid.*, p. 317; *Hull Museum Publications*, No. 22, p. 24.
- 94 ——— Geological Discovery at Bridlington. [New Section]. *Hull Museum Publications*, No. 19, pp. 17-19. *Geol. Mag.*, dec v., vol. i., pp. 335, 336.
- 95 ——— Roman Villa at Harpham, East Yorkshire. [Brief geological notes]. *Trans. Hull Field Naturalists' Club.*, vol. iii., pp. 173-179; *Hull Museum Publications*, No. 23.
- 96 SHERBORN, C. D.—Notes on the Cliff Sections, Map and Sections [of Flamborough Head]. Appendix B. to A. W. Rowe's paper, which see.

- 97 SIMPSON, H.—Note on the Submerged Forest and Peat Beds at Redcar. *Proc. Cleveland Nat. Field Club*, vol. i., pt. 5, pp. 274, 275; *Naturalist*, p. 288.
- 98 SIMPSON, W.—Records and Comparison of Three Deep Borings in the Millstone Grits at Halifax. [West End Dye Works, 508 ft., Stone Trough Brewery, 649 ft., Mill Street Works, 843 ft. *Proc. Yorks. Geol. Soc.*, vol. xv., pt. 1, pp. 79-90.
- 99 SPEIGHT, HARRY.—Chronicles and Stories of Bingley and District. Ed. 4. Pp. 417.
- 100 STATHER, J. W.—Quartzite Pebbles on the Yorkshire Wolds. *Naturalist*, pp. 9-11.
- 101 ——— Report of the Committee to investigate the Fossiliferous Deposits at Kirmington, Lincolnshire, and at various localities in the East Riding of Yorkshire. *Geol. Mag.*, dec. v., vol. i., pp. 512-514; *Rep. Brit. Assoc.* for 1904. [See 1905].
- 102 STOBBS, J. T.—The Yoredale Rocks of North Derbyshire. [The use of the term Yoredale]. *Geol. Mag.*, dec. v., vol. i., p. 430.
- 103 THOMPSON, W. H.—John Phillips the Geologist. [A biography]. *Gentleman's Mag.*, vol. ccxcvi., pp. 554-563.
- 104 THRESH, J. C.—The Examination of Waters and Water Supplies. [Yorkshire, pp. 6-11, 87, 186]. Pp. xvi., 460. 8vo. *London*.
- 105 TYNEDALE, W. G.—[See A. M. Davies].
- 106 WALLER, J. W.—Handbook for Yorkshire. [Brief geological notes].
- 107 WELLBURN, E. D.—On some New Species of Fossil Fish from the Millstone Grit Rocks, with an Amended List of the Genera and Species. *Proc. Yorks. Geol. Soc.*, vol. xv., pt. 1, pp. 70-78.
- 108 WATTS, W. W.—Photographs of Geological Interest in the United Kingdom. Fourteenth Report of the Committee. *Rep. Brit. Assoc.* for 1903, pp. 197-218.
- 109 ——— (edited by).—British Geological Photographs, published in 3 parts by the Geological Photographs Committee of the British Association, Issue iii., Jan.
- 110 WEISS, F. E. —A Probable Parasite of Stigmarian Rootlets



- [from the Halifax Hard Bed]. *New Phytologist*, vol. iii., No. 3, pp. 63-68; *Naturalist*, p. 131.
- 111 WHITE, H. M.—Old Ingleborough: Talks of the Lonsdale Hermit. [Notes on the geology of the district]. Pp. 108.
- 112 WILSON, J. E.—The Glacial Lakes of the Bradford District. *Bradford Sci. Journ.*, No. 1, July, pp. 5-10.
- 113 WINN, R. G. A.—Sea Coast Erosion and Remedial Works. Pp. 32. 4to. *London*. Privately printed. *Public Works*, vol. ii., pp. 202-206.
- 114 ——— The Sea's Encroachment on the East Coast. [Plan and sections]. *Naturalist*, pp. 305-308. [See 1903].
- 115 W[OODHEAD], T. W.—[See W. G. S[mith]].
- 116 WOODS, H.—A Monograph of the Cretaceous Lamelli-branchiata of England. [*Lima subrigida*, *L. hoperi*, *L. longa*, *L. parallela*, *L. gaultina* from Speeton]. Vol. ii., pt. 2, pp. 56, plate 7. *Monog. Pal. Soc.*, vol. lviii., pp. 1-56, plates i.-vii.
- 117 WOODWARD, A. S.—The History of the Collections contained in the Natural History Department of the British Museum, vol. i., the Department of Geology, pp. 198-340. 8vo. *London*. [See under E. Ray Lankester].
- 118 WOODWARD, H.—A Retrospect of Geology in the last Forty Years. *Geol. Mag.*, dec. v., vol. i., pp. 49-56, 97-106, 145-157.
- 119 ——— [See E. Ray Lankester].
- 120 WOODWARD, H. B.—Stanford's Geological Atlas. [See 1907].
- 121 YEO, T. B.—The Therapeutics of Mineral Springs and Climates. [Harrogate, pp. 200-203]. 8vo. *London*.

## 1905.

- 1 ANON.—Gaping Ghyll Hole. *Yorkshire Ramblers' Club Journ.*, vol. ii., No. 6, p. 173. [See *Naturalist*, 1906, pp. 34, 35].
- 2 ——— Little Don Valley Water-Works. [Few geological notes]. *Trans. Manchester Geol. Soc.*, vol. xxix., pt. iv., pp. 162-164.
- 3 ——— Sandstone in Architecture. [Yorkshire sandstones noted]. *Quarry*, vol. x., pp. 397-401.

- 4 ANON.—Large Mammoth Tooth at Withernsea. *Naturalist*, p. 348 ; *Ibid.*, 1906, p. 136.
- 5 ——— Harrogate Illustrated with Notes on its environs. [History and account of Mineral Springs]. Ed. 4. 8vo. Bournemouth. Ed. 1. 1899.
- 6 ——— Yorkshire Naturalists at Ripon. Geological Report by W. L. CARTER, p. 177. *Naturalist*, pp. 175-182.
- 7 ——— Final Report of the Royal Commission on Coal Supplies. Part 9. Report of the Geological Committee upon the Resources of the Concealed and Improved Coalfields of the United Kingdom. [Appendix III. Sub-Report on the Concealed Portion of the Coalfields of Yorkshire, Derbyshire, and Nottinghamshire, by P. F. KENDALL, pp. 18-45]. *Government Publication*. Fol. London. [See also *Coll. Guard.*, vols. lxxxix. and xc., 1905.
- 8 ALLEN, H. A.—Catalogue of Types and Figured Specimens of British Lamellibranchiata from the Rhætic Beds and Lias, preserved in the Museum of Practical Geology., London. *Summary Prog. Geol. Survey* for 1904, pp. 172-177.
- 9 BAIN, W., and W. EDGECOMBE.—The Physiology and Therapeutics of the Harrogate Waters, Baths, and Climate applied to the treatment of Chronic Disease. [Chemical notes]. 8vo. London.
- 10 BAIN, —.—Quarries Inspection Report, 1904. Mr. Bain's Report on the Durham District. I., Report under the Metalliferous Mines Acts. *Quarry*, vol. x., pp. 401-403.
- 11 BANCROFT, F. J.—The Hull Water Supply. *Trans. Brit. Assoc. Waterworks, Eng.*, vol. ix., pp. 212-227.
- 12 ——— [See S. W. Wheaton].
- 13 BLAKE, J. F.—A Monograph of the Fauna of the Cornbrash. Pt. 1. Pp. 1-100 ; plates i.-ix. [Yorkshire, pp. 16, 17, 31, 33, 44, 47, 60, 64, 71, 76, 79, 80, 81-90, 92, 96, 99]. *Monogr. Pal. Soc.*, vol. lix.
- 14 BOOTH, T. S.—Jockey Hole and Rift Pot. *Yorks. Ramblers' Club Journ.*, vol. ii., No. 6, pp. 145-156.
- 15 BRODE, T. A.—Happy Hunting-Grounds for Nature Students. III., Coxwold and Kilburn. [Brief Geological notes]. *Nature Study*, pp. 105-108.

- 16 BRODRICK, H.—Notes on a recently explored Fault-Fissure on Ingleborough. *Proc. Liverpool Geol. Soc.*, vol. x., pt. 1, pp. 43-47.
- 17 ——— Note on the Geological Features of Rift Pot. *Yorks. Ramblers' Club Journ.*, vol. ii., No. 6, pp. 157-159.
- 18 BROWN, G. H.—The Clapham Cave. Pp. 1-28. *Settle*.
- 19 CAREY, A. E.—Coast Erosion. [Yorkshire noted]. *Proc. Inst. Civ. Eng.*, vol. clix., pp. 42-57.
- 20 CARTER, W. L.—Rev. John Hawell. In Memoriam. *Proc. Yorks. Geol. Soc.*, vol. xv., pt. 2, pp. 331-333 ; *Naturalist*, 1904, p. 241.
- 21 ——— Secretary's Report, 1903. *Proc. Yorks. Geol. Soc.*, vol. xv., pt. 2, pp. 334-350.
- 22 ——— and A. DWERRYHOUSE.—The Underground Waters of North-west Yorkshire. Pt. 2. The Underground Waters of Ingleborough. *Proc. Yorks. Geol. Soc.*, vol. xv., pt. ii., pp. 248-253. Maps, sections and views.
- 23 ——— [See Anon.].
- 24 CUDWORTH, W.—Unique Yorkshire Cave Implement [in Calf Hole Cave in Upper Wharfedale]. *Bradford Sci. Journ.*, No. 3, pp. 90-92. [See *Naturalist*, 1906, p. 68].
- 25 CULPIN, H., and G. GRACE.—Preliminary Note on Upper Coal-Measures in Yorkshire. [Cadeby and Conisborough]. *Proc. Yorks. Geol. Soc.*, vol. xv., pt. 2, p. 330 ; *Naturalist*, p. 40.
- 26 DAVISON, C.—The Derby Earthquakes of July 3rd, 1904. [Also South Yorkshire]. *Quart. Journ. Geol. Soc.*, vol. lx., pp. 8-17.
- 27 ——— Twin Earthquakes. *Ibid.*, pp. 18-34.
- 28 ——— Yorkshire Earthquakes. [Records and dates since beginning of the 19th century]. *Naturalist*, Jan., pp. 26-28.
- 29 ——— On Earth Shakes in Mining Districts. [Barnsley, 1903]. *Geol. Mag.*, dec. v., vol. ii., pp. 219-223.
- 30 ——— A Study of Recent Earthquakes. Pp. xii., 355. 8vo. *London and Newcastle*.
- 31 DOUVILLÉ, H.—Les 'Coal-Balls' du Yorkshire. *Bull. Soc. Geol. Fr.*, ser. 4, vol. v., pp. 154-157.

- 32 DWERRYHOUSE, A. R.—The Movements of Underground Waters of North-West Yorkshire. Fifth Report of the Committee. *Rep. Brit. Assoc.* for 1904, pp. 225, 226.
- 33 ——— [See W. L. Carter].
- 34 EDGECOMBE, W.—[See W. Bain].
- 35 ELGEE, F.—A Gravel Deposit in Lonsdale. *Proc. Cleveland Nat. Field Club*, vol. ii., pt. 1, pp. 49, 50.
- 36 FARRER, R.—Report on the Sanitary State and Administration of the Howden Rural District in the East Riding of Yorkshire. Pp. 12. *Local Government Board Report*. (No. 206). Fol. London.
- 37 ——— Report to the Local Government Board on an Outbreak of Enteric Fever at Denaby Main, in the Doncaster Rural District. *Local Government Board Report*, No. 216. Pp. 16. Fol. London.
- 38 FAWCETT, E. A. S.—[See S. W. Wheaton].
- 39 FOX-STRANGWAYS, C.—Excursion to the Whitby District. Notes on the Several Excursions. [From Whitby to Staithes, pp. 50-55; from Saltburn to Staithes, pp. 55, 56; the Moorland District, pp. 56-58; the Limestone Quarries of Pickering, pp. 58-60]. *Trans. Leicester Lit. Phil. Soc.*, vol. ix., pt. 1, pp. 50-60.
- 40 GEIKIE, A.—Landscape in History, and other Essays. Pp. viii., 352. [Yorkshire on p. 24, etc.]. 8vo. London.
- 41 ——— The Founders of Geology. Ed. 2. Pp. xii.+486. [Yorkshire, p. 395, etc.].
- 42 GILCHRIST, R.—Geology. [Report on, includes list of Yorkshire Erratics]. *Ann. Rep. Scarborough Phil. Soc.*, for 1904, pp. 33-35.
- 43 GOODCHILD, J. G.—On Unconformities and Palæontological Breaks in Relation to Geological Time. [Yorkshire examples, pp. 298, 300]. *Trans. Edinburgh Geol. Soc.*, vol. viii., pp. 275-314.
- 44 GRACE, G.—[See H. Culpin].
- 45 [GREENWELL, A.].—Digest of Evidence given before the Royal Commission on Coal Supplies, 1901-5, vol. 1. Pp. lxiv., 474. 8vo. London. Vol. ii., pp. 419, 1906; vol. iii., pp. 209, 1907; Reprinted from the *Coll. Guard.*, vols. lxxxvi.-xc., 1903-1905; Vol. i., reviewed in *Naturalist*, 1905, pp. 314, 315.

- 46 HARMER, F. W.—The Pleistocene Deposits of East Anglia. *Proc. Yorks. Geol. Soc.*, vol. xv., pt. 2, pp. 315-329, and maps.
- 47 HARRISON, W. J.—Geology of the North Riding of Yorkshire. *Kelly's Post Office Directory*, pp. 15-18. 8vo. *London*.
- 48 ——— Geology of the East Riding of Yorkshire. *Ibid.*, pp. 408-411.
- 49 HAWELL, J.—The History of Easby. [Geological notes]. *Proc. Cleveland Nat. Field Club*, vol. ii., pt. 1, pp. 22-34; *The Stokesby and Ingleby Parish Magazine*.
- 50 HIND, W.—Life Zones in the British Carboniferous Rocks. Report of the Committee. *Rep. Brit. Assoc.* for 1904, pp. 226-237.
- 51 ——— A Monograph of the British Carboniferous Lamelli-branchiata. Vol. ii. Index. *Monogr. Pal. Soc.*, vol. lix.
- 52 ——— [See J. T. Stobbs].
- 53 HOBSON, B.—On a Displaced Mass of Chalk on the Foreshore of Speeton Cliffs, Flamborough Head. *Geol. Mag.*, dec. v., vol. ii., pp. 256, 257.
- 54 HOME, G.—The Evolution of an English Town, being the story of the ancient town of Pickering in Yorkshire from Prehistoric times up to the year of our Lord Nineteen Hundred and Five. [Chapter ii. The Forest and Vale of Pickering in Palæolithic and Pre-glacial Times, pp. 12-17. Chapter iii. The Vale of Pickering in the Lesser Ice Age, pp. 18-27. Map and views of the Vale of Pickering in the Ice Age.] Pp. xix., 299. 8vo. *London*.
- 55 ——— [See 1904].
- 56 HOWARTH, J. H.—[See P. F. Kendall].
- 57 HOWORTH, H. H.—Ice or Water: Another Appeal to Induction from the Scholastic Methods of Modern Geology. [Many references to Yorkshire]. Vols. i. and ii. *London*. Pp. lii.+536 and viii.+498.
- 58 HUNT, A. R.—The Geological Physics of Shallow Seas. [Refers to Sewerby beach]. *Geol. Mag.*, dec. v., vol. ii., pp. 321-326.
- 59 IRVING, J.—The [Scarborough] Museum. General Guide. *Scarborough Phil. Soc.*, pp. 16.

- 60 JOHNS, C.—Geological Notes on the District around Askrigg. *Naturalist*, pp. 212-214.
- 61 ——— A Yorkshire Glacial Problem. [Erratics at Crosspool near Sheffield]. *Ibid.*, pp. 243-245.
- 62 JOHNSON, J. W. H.—Large Bog-Oak at Horbury. *Ibid.*, p. 166.
- 63 JOWETT, A., and H. B. MUFF.—The Glaciation of the Bradford and Keighley District. *Proc. Yorks. Geol. Soc.*, vol. xv., pt. 2, pp. 193-247. Under different title, *Bradford Sci. Journ.*, No. 4, pp. 115-119; No. 5, pp. 142-148; No. 6, pp. 164-172; No. 7, pp. 211-221; No. 8, pp. 243-250.
- 64 KENDALL, P. F.—Erratic Blocks of the British Isles. Ninth Report of the Committee. [Yorkshire, p. 241]. *Rep. Brit. Assoc. for 1904*, pp. 237-241.
- 65 ——— On the Geological Structure of South-east Yorkshire. *Trans. Brit. Assoc. Waterworks Eng.*, vol. ix., pp. 168-183.
- 66 ——— The Concealed Coalfields of Yorkshire, Derbyshire, and Nottinghamshire. *Naturalist*, pp. 196-201, 233-237. [See Anon].
- 67 ——— and J. H. HOWARTH.—The Yorkshire Boulder Committee and its Eighteenth Year's Work, 1903-1904; *Naturalist*, pp. 79, 80.
- 68 LAMPLUGH, G. W.—Note on Lower Cretaceous Phosphatic Beds and their Fauna. [Refers to Speeton]. *Rep. Brit. Assoc. for 1904*, p. 548.
- 69 LANKESTER, E. R.—Extinct Animals. Pp. xxiii., 331. 8vo. *London*.
- 70 LINDSEY, C. R.—Notes on the Occurrence of Brookite in the Cleveland Ironstone. *Min. Mag.*, vol. xiv., No. 64, pp. 96-98; *Naturalist*, p. 228.
- 71 LORD, FREDERICK.—Bygone Hornsea: Its remarkable story retold. [Brief Geological notes]. *Hull*, Pp. 19.
- 72 LOMAX, J.—[See F. E. Weiss].
- 73 MANBY, E. P.—Report of the Local Government Board upon the Sanitary Circumstances and Administration of the Barnard Castle and Startforth Rural Districts comprised within the Teesdale Union. Pp. 12. *Local Government Board Report*. (No. 220). Fol. *London*.

- 74 MARKHAM, C. A.—Earthquake of 23rd April, 1905. [Yorkshire, etc.]. *Journ. Northants. Nat. Hist. Soc.*, vol. xiii., p. 73.
- 75 MARR, J. E.—The Anniversary Address of the President. [Dealing with the Classification of the Sedimentary Rocks, Yorkshire, p. lxxix.]. *Quart. Journ. Geol. Soc.*, vol. lxi., pp. lxi.-lxxxvi.
- 76 MATTHEWS, E. R.—Erosion on the Holderness Coast of Yorkshire. *Proceedings Inst. Civ. Eng.*, vol. clxx., pp. 58-78; Discussion, pp. 79-100; Correspondence, pp. 100-142.
- 77 MIDDLETON, F. E.—On the Wash-outs in the Middle Coal-Measures of South Yorkshire. *Quart. Journ. Geol. Soc.*, vol. lxi., pp. 339-344; *Geol. Mag.*, dec. iv., vol. ii., pp. 187, 188.
- 78 MONCKMAN, J.—The Ice Age in Bradford. *Bradford Sci. Journ.*, No. 3, pp. 65-75.
- 79 MORTIMER, J. R.—Forty Years' Researches in British and Saxon Burial Mounds of East Yorkshire, including Romano-British Discoveries, and a Description of the Ancient Entrenchments on a Section of the Yorkshire Wolds. [Geological notes]. Pp. lxxxvi., 452. 4to. *London, Hull, York*. [1905].
- 80 MUFF, H. B.—Pre-Glacial Beaches of Bridlington and S. of Ireland. *Geol. Mag.*, dec. iv., vol. ii., p. 432.
- 81 ——— [See A. Jowett].
- 82 PAUL, G.—Harrogate illustrated. Ed. 4. [See 1899].
- 83 PETCH, T.—Notes on the Reclaimed Land of the Humber District. *Trans. Hull Field Nat. Club*, pp. 221-231.
- 84 RASTALL, R. H.—The Blea Wyke Beds and the Dogger in North-East Yorkshire. *Quart. Journ. Geol. Soc.*, vol. lxi., pp. 441-460; *Naturalist*, pp. 322, 323; *Geol. Mag.*, dec. iv., vol. ii., p. 284.
- 85 RUSSELL, W.—Final Report of the Royal Commission on Coal Supplies, 1905. *Coll. Guard.* Special Supplement, Jan. 27th, 1905.
- 86 ROBINSON, J. F.—Natural Aspects of Hull and District. Hull Conference. [National Federation of Assistant Teachers]. Souvenir, pp. 45-55. Also *Trans. Hull Field Nat. Club*, vol. iii., pt. 3, pp. 189-195.

- 87 RUDLER, F. W.—A Handbook to the Collection of the Minerals of the British Islands, mostly selected from the Ludlam Collection, in the Museum of Practical Geology. [Few from Yorkshire]. Pp. x., 241. 8vo. *London*.
- 88 SCOTT, D. H.—The Early History of Seed-bearing Plants as recorded in the Carboniferous Flora. *Mem. Proc. Manchester Lit. Phil. Soc.*, vol. xlix., No. 12, pp. 32.
- 89 ——— The President's Address: "What were the Carboniferous Ferns?" [Yorkshire species noted]. *Journ. Roy. Mic. Soc.*, for 1905, pp. 137-149.
- 90 ——— The Sporangia of *Stauropteris oldhamia* Binney. (*Rachiopteris oldhamia* Will.). *The New Phytologist*, vol. iv., Nos. 5 and 6, pp. 114-120.
- 91 SEWELL, J. T.—Marine Erosion in the Whitby District. *Naturalist*, pp. 85-87.
- 92 SHEPPARD, T.—The Making of East Yorkshire. *Naturalist*, pp. 105-115, 131-139. Also reprinted, with additions, pp. 29, 8vo. *London, Hull and York*. 1906. Reviewed in *Naturalist*, 1906, pp. 30, 31.
- 93 ——— On a Section in the Boulder-clay near Withernsea. *Naturalist*, pp. 301-304, 379.
- 94 ——— Yorkshire Naturalists at Ripon. [Geological notes]. *Ibid.*, pp. 175-182.
- 95 ——— Yorkshire Naturalists at Askrigg. [Geological notes]. *Ibid.*, pp. 209-216.
- 96 ——— Yorkshire Naturalists at Loftus. [Geological notes]. *Ibid.*, pp. 246-253.
- 97 ——— Yorkshire Naturalists at Pocklington. [Geological notes]. *Ibid.*, pp. 266-273.
- 98 ——— Yorkshire Naturalists at Barnsley. [Geological notes]. *Ibid.*, pp. 293-298.
- 99 ——— Large Mammoth Tooth at Withernsea. *Ibid.*, p. 348. *Hull Museum Publications*, No. 28, p. 26. [See 1905].
- 100 ——— Roman Villa at Harpham, East Yorks. [Brief geological notes]. *Hull Museum Publications*, No. 23, p. 8.
- 101 ——— Natural History as a Hobby. [Geological notes]. *Institute Notes* (Hull), No. 9, Oct. pp. 8-10. Reprinted (from the *Hull and East Yorkshire Teacher*,



- July-Oct., 1908). Pp. 7. 8vo. *London, Hull and York.* 1908.
- 102 SPEIGHT, H.—Chronicles and Stories of Old Bingley. Ed. 4. [See 1898].
- 103 STATHER, J. W.—Investigation of the Fossiliferous Drift Deposits at Kirmington, Lincolnshire, and at various localities in the East Riding of Yorkshire. Report of the Committee. *Rep. Brit. Assoc.* for 1904, pp. 272-274; *Naturalist*, pp. 15-18; *Geol. Mag.*, dec. v., vol. i., pp. 512-514. 1904.
- 104 STOBBS, J. T.—The Marine Beds in the Coal Measures of North Staffordshire. With notes on their Palæontology by Wheelton Hind. [Brief references to Yorkshire]. *Quart. Journ. Geol. Soc.*, vol. lxi., pp. 495-547.
- 105 STRAHAN, A.—Presidential Address to Section C. [Map of Post-Carboniferous and Pre-Permian Earth Movements]. *Rep. Brit. Assoc.* for 1904, pp. 532-541.
- 106 [SUDDABY, J.].—Hull and its Water Supply: a brief retrospect of six centuries. Pp. 32. *Hull.* Privately printed.
- 107 THOMPSON, C.—Note on the Occurrence of *Actinocamax plenus* in the Chalk of Yorkshire [at Swanland, near Hull]. *Naturalist*, pp. 202, 203; *Geol. Mag.*, dec. v., vol. ii., pp. 381, 382.
- 108 WATTS, W. W.—Photographs of Geological Interest in the United Kingdom. *Rep. Brit. Assoc.* for 1904, pp. 242-266.
- 109 WEISS, F. E., and J. LOMAX.—The Stem and Branches of *Lepidodendron selaginoides*. [Halifax Hard Bed]. *Mem. Proc. Manchester Lit. Phil. Soc.*, vol. xlix., No. 17, pp. 8.
- 110 WHEATON, S. W., and E. A. S. FAWCETT.—Holderness, East Riding of Yorkshire. Report on the Water Supply of that portion of the East Riding of Yorkshire, which is known as Holderness. Pp. 27. Appendix A, Report on the Water Supply to South Holderness (including Hornsea). By F. J. BANCROFT. *Report of the Local Government Board.* Fol. *London.*
- 111 WOODS, H.—A Monograph of the Cretaceous Lamelli-branchiata of England. [Yorkshire specimens, pp. 63, 71, 74, 89]. Vol. ii., pt. 2, pp. 57-96; plates viii.-xi. *Monogr. Pal. Soc.*, vol. lix., for the year 1905.

1906.

- 1 ANON.—East Coast Erosion. *Naturalist*, p. 108.
- 2 ——— Shap Granite Boulders. [Royston, near Barnsley].  
*Ibid.*, p. 411.
- 3 ——— Whitby Excursion Guide. *Brit. Assoc.*
- 4 ——— James Monkman, D.Sc. [Obituary Notice: refers to his geological work in the Bradford area]. *Bradford Sci. Journ.*, No. 7, pp. 193-195.
- 5 ——— William Cudworth. [Refers to his work in the Bradford area]. *Ibid.*, No. 8, pp. 225, 226.
- 6 ——— Professor J. F. Blake, M.A., F.G.S., [Obituary notice and list of publications]. *Geol. Mag.*, dec. v., vol. iii., pp. 426-431.
- 7 ——— Vanishing England. The Formation of the Coast Erosion Commission: Its Great Need Illustrated from Views specially obtained from the Sections of our Coast which are in Immediate Danger. Drawn by PERCY HOME and others. *Supplement to the Sphere*, July 28th, vol. xxvi., No. 340.
- 8 ALLEN, H. A.—Catalogue of Types and Figured Specimens of British Lamellibranchiata from the Lower, Middle, and Upper Oolites, preserved in the Museum of Practical Geology, London. *Summary Prog. Geol. Survey* for 1905, pp. 175-195.
- 9 BACKHOUSE, J.—Lead Mining in Yorkshire. [Mainly historical]. *Naturalist*, pp. 318-320; *Rep. Brit. Assoc.* for 1906, pp. 318-320.
- 10 BAKER, J. G.—North Yorkshire: Studies of its Botany, Geology, Climate, and Physical Geography, and a Chapter on the Mosses and Hepatics of the Riding by M. B. SLATER. Pp. 680. 8vo. *Hull and London.*
- 11 BARNES, J. B.—[See H. Brodrick].
- 12 BENNEY, A. E.—Ingleton Granite. *Bradford Sci. Journ.*, No. 9, p. 285.
- 13 BEVAN, D. W.—Scarborough for the Geologist, pp. 102-118, in Scarborough: A Guide and Souvenir. *Edinburgh.* Pp. 187.
- 14 BOGG, E.—Richmondshire and the Vale of Mowbray. [Notes on the Geology, pp. 187-190]. In two volumes.

- Vol. i., the Vale of Mowbray. Pp. xvi., 428. *London and Leeds*.
- 15 BONNEY, T. G.—On the Origin of the Trias. (*Rep. Brit. Assoc. for 1906*). *Geol. Mag.*, dec. v., vol. iii., pp. 519. 520. [See 1907].
- 16 BOSWORTH, T. O.—The Zones of the Lower Chalk. *Geol. Mag.*, dec. v., vol. iii., pp. 412-418, 574-576. [See A. J. Jukes-Browne].
- 17 BRODRICK, H.—On Faults as a Predisposing Cause for the Existence of Pot-holes on Ingleborough. *Naturalist*, pp. 323, 324.; *Geol. Mag.*, dec. v., vol. iii., pp. 517, 518. [See also 1907].
- 18 ——— and C. A. HILL.—A Recently Discovered Skeleton in Scoska Cave, Littondale. *Naturalist*, p. 322; *Rep. Brit. Assoc. for 1906*, pp. 698, 699.
- 19 ——— and J. B. BARNES.—[Notes on a recently discovered Skeleton in Scoska Cave, Littondale]. *Eleventh Rep. Southport Nat. Sci. Soc.*, 1905-6, pp. 52-55.
- 20 BROWN, G. H.—The Underground Streams in the Neighbourhood of Clapham and Malham, *Settle*, pp 1-23.
- 21 BURTON, J. J.—Yorkshire Naturalists at Guisborough. [Geological notes]. *Naturalist*, pp. 393, 394; 1907, p. 65.
- 22 BUTTERFIELD, A. E.—Islands in the Humber. [Alteration of outline]. *Trans. Hull Geol. Soc.*, vol. vi., pt. 1., pp. 33-37.
- 23 CARTER, W. L.—The Evolution of the Don River System. *Proc. Yorks. Geol. Soc.*, vol. xv., pt. 3, pp. 388-410.
- 24 ——— The Glaciation of the Don and Dearne Valleys. *Ibid.*, pp. 411-436.
- 25 ——— In Memoriam. William Ackroyd, F.I.C., F.C.S. *Ibid.*, pp. 468-472.
- 26 ——— Secretary's Report, 1904. [Notice of Meetings and Excursions]. *Ibid.*, pp. 473-493.
- 27 ——— River Capture in Yorkshire. [Abstract]. *Trans. Leeds Geol. Assoc.*, part 13, pp. 40, 41.
- 28 CASH, W.—The Fossil Plants of the Yorkshire Coal Measures. Part 1—What and How to Observe, Collect and Record. *Naturalist*, pp. 116-129.

- 29 CORBETT, H. H.—Pleistocene Mammalian Remains near Doncaster. [*Cervus elephus* and *Rhinoceros*]. *Naturalist*, p. 109.
- 30 COTSWORTH, M. B.—The Most Interesting District in England: Yorkshire, etc. [Geological notes]. Prepared for the British Association Meeting at York. Pp. 36. Maps and Illustrations. 4to. *York*.
- 31 CRICK, G. C.—Note on the Type Specimen of *Pleuromacrus pulcher*. [From Hebden Bridge]. *Proc. Malacol. Soc.*, vol. vi., pt. 5, p. 272. [See also 1904].
- 32 ——— Note on a Rare Form of *Actinocamax* (*A. grossouvrei*) from the Chalk of Yorkshire. *Naturalist*, pp. 155-158.
- 33 CROFTS, W. H.—Notes on the Indications of a Raised Beach at Hessle. *Trans. Hull Geol. Soc.*, vol. vi., pt. 1, pp. 58-64.
- 34 ——— [See P. F. Kendall].
- 35 CULPIN, H.—A Post-Permian Fault at Cusworth, near Doncaster. *Proc. Yorks. Geol. Soc.*, vol. xv., pt. 3, pp. 453-455.
- 36 ——— Yorkshire Naturalists at Askern. [Geological Section]. *Naturalist*, pp. 369, 370.
- 37 ——— and G. GRACE. Recent Exposures of Glacial Drift at Doncaster and Tickhill. *Naturalist*, pp. 325-327. [See 1907].
- 38 DANFORD, C. G.—Rare Speeton Clay Fossils. *Naturalist*, p. 214.
- 39 ——— The 'Shell-bed' at Speeton. *Ibid.*, p. 252.
- 40 ——— Notes on the Speeton Ammonites. *Ibid.*, pp. 330-331. *Geol. Mag.*, dec. v., vol. iii., pp. 520, 521. [See also 1907].
- 41 ——— Notes on the Belemnites of the Speeton Clays. *Trans Hull Geol. Soc.*, vol. vi., pt. 1, pp. 1-14. [See also *Summary of Progress Geol. Survey* for 1906, pp. 71, 72].
- 42 DAVISON, C.—The Doncaster Earthquake of April 23rd, 1905. *Quart. Journ. Geol. Soc.*, vol. lxii., pp. 5-12; *Geol. Mag.*, dec. v., vol. iii., pp. 42, 43.
- 43 DRAKE, H. C.—Cornbrash Fossils from North-East Yorkshire. *Naturalist*, Feb., p. 60.
- 44 DWERRYHOUSE, A. R.—The Movements of Underground

- Waters of North-West Yorkshire. Sixth and Final Report. *Rep. Brit. Assoc.* for 1905, p. 170. [See 1905].
- 45 — Report of the Magnesian Limestone Committee, [Garforth, Kippax, Pontefract]. *Trans. Leeds Geol. Assoc.*, pt. 13, pp. 45-48.
- 46 ELGEE, F.—Glacial Phenomena in the Neighbourhood of Guisborough. *Naturalist*, pp. 268-270.
- 47 FLETT, J. S.—[See E. J. Lovegrove].
- 48 FOX-STRANGWAYS, C.—The Water Supply (from Underground Sources) of the East Riding of Yorkshire, together with the neighbouring portions of the Vales of York and Pickering; with records of Sinkings and Borings. [With a chapter on the Rainfall by H. R. MILL]. *Memoirs of the Geological Survey*. Pp. 6. 181. 8vo. London.
- 49 GIBSON, W.—Marine Beds in the Coal Measures of Yorkshire. Preliminary Notice. *Naturalist*, pp. 112, 113.
- 50 GRACE, G.—Notes on Sections in Gravels near Doncaster. [Armthorpe]. *Naturalist*, pp. 184-186.
- 51 — [See H. Culpin].
- 52 GREENWELL, A.—Digest of the Evidence given before the Royal Commission on Coal-Supplies, 1901-1905. [Reproduced from the *Colliery Guardian*]. Vol. ii., pp. xx. 419. 4to. London. [See under 1905].
- 53 GREGORY, E. E.—The Wild Boar and its Associations. [Geological Evidences]. *Bradford Sci. Journ.*, No. 8, pp. 228-231.
- 54 — Glacial Lakes in and about Airedale. *Ibid.*, No. 9, pp. 255-270; [misprinted 165-170].
- 55 HARMER, F. W.—The Glacial Deposits of the East of England. [Vale of York, etc.]. *Geol. Mag.*, dec. v., vol. iii., pp. 468-470.
- 56 — Lake Oxford and the Goring Gap. [Vale of York glacier]. *Ibid.*, pp. 470-472.
- 57 HARTSHORN, J.—[See W. Horne].
- 58 HAWKESWORTH, E.—Some Drift Deposits near Leeds. *Proc. Yorks. Geol. Soc.*, vol. xv., pt. 3, pp. 456-462. *Trans. Leeds Geol. Assoc.*, pt. 13, pp. 34-39.
- 59 — Yorkshire Naturalists at Ingleton. *Naturalist*, pp. 233-238.

- 60 HAWKESWORTH, E.—Fish Remains in the Speeton Clay. [*Leptolepis*]. *Naturalist*, p. 263.
- 61 ——— Yorkshire Naturalists at Fewston. [Geological Section]. *Ibid.*, pp. 271, 272.
- 62 HERRIES, R. S.—The Geology of the Yorkshire Coast between Redcar and Robin Hood's Bay. *Proc. Geol. Assoc.*, vol. xix., pt. 10, pp. 410-445.
- 63 ——— Long Excursion to the Yorkshire Coast. *Ibid.*, pp. 464-477.
- 64 HILL, C. A.—[See H. Brodrick].
- 65 HIND, W.—Life-Zones in the British Carboniferous Rocks. Interim Report of the Committee. [Pendleside]. *Rep. Brit. Assoc. for 1905*, pp. 171-174.
- 66 ——— Fossil Molluscan Zones in the Carboniferous Rocks of the Midlands. [North Staffordshire, but applies to other districts]. Part 1. *Naturalist*, pp. 253-256 (plates of fossils). Continued under different title in *Naturalist*, 1907, pp. 17-33, 90-96.
- 67 ——— and J. T. STOBBS.—The Carboniferous Succession below the Coal-Measures in North Shropshire, Denbighshire, and Flintshire. [Yorkshire referred to]. *Geol. Mag.*, dec. v., vol. iii., pp. 385-400, 445-459, 496-507.
- 68 HOME, G.—Yorkshire Dales and Fells, painted and described by Gordon Home. [Geology, pp. 76, 77]. Pp. 180. Large 8vo. *London*. Reviewed in *Naturalist*, p. 438.
- 69 HOME, PERCY.—[See Anon.].
- 70 HORNE, W., and J. HARTSHORN.—Wensleydale. 'British Association Excursion Guide,' with list of Fossil Fish Remains, etc. Pp. 15.
- 71 HOWARTH, J. H.—The Geology of Ingleborough. *Trans. Leeds Geol. Assoc.*, pt. 13, pp. 7-13.
- 72 HORNE, J. A.—[See E. J. Lovegrove].
- 73 HUGHES, T. MCK.—Ingleborough, Part 2 [should be Part III.]. Stratigraphy (continued). *Proc. Yorks. Geol. Soc.*, vol. xv., pt. 3, pp. 351-371. [See 1902].
- 74 INGHAM, W.—Brimham Rocks and Pateley Bridge. 'British Association Excursion Guide.' [Brief geological notes]. Pp. 7. 8vo. *York*.

- 75 IRVING, J.—Geology [Scarborough]. ‘British Association Excursion Guide.’ [Brief geological notes]. Pp. 10-12. 8vo. *York*.
- 76 JEANS, J. S.—The Iron Trade of Great Britain. [Geological and historical notes on the Cleveland Iron Trade]. Pp. xvi., 277. 8vo. *London*.
- 77 JOHNS, C.—Sheffield’s Trough Fault. *Naturalist*, pp. 87-89.
- 78 ——— The Permian Salt Lake. [Refers to the South Carr boring]. *Ibid.*, pp. 176-178.
- 79 ——— On the Ingleton Carboniferous Basement Beds. *Ibid.*, pp. 231-232.
- 80 ——— [Note on the Craven Faults]. *Ibid.*, pp. 238, 239.
- 81 ——— On the Carboniferous Basement Beds at Ingleton. [With a note by A. VAUGHAN]. *Geol. Mag.*, dec. v., vol. iii., pp. 320-323.
- 82 ——— On Differential Earth Movements during Carboniferous Times, and their significance as factors in determining the Limits of the Yorkshire, Derbyshire, and Nottinghamshire Coalfield. *Proc. Yorks. Geol. Soc.*, vol. xv., pt. 3, pp. 373-379.
- 83 JOHNSON, W.—Geology [of York District, pp. 259-265]. Handbook of York and District prepared for the York Meeting of the British Association. 8vo. *York*.
- 84 JUKES-BROWNE, A. J.—The Zones of the Lower Chalk. [Reply to T. O. Bosworth]. *Geol. Mag.*, dec. v., vol. lii., pp. 507-511.
- 85 KENDALL, P. F.—Glacier Lakes in the Cleveland Hills. (Abstract). *Trans. Leeds Geol. Assoc.*, Part 13, pp. 23, 24.
- 86 ——— The Origin of the British Fauna and Flora. (Abstract). *Ibid.*, pp. 29-32.
- 87 ——— The Eastern Extension of the Yorkshire Coalfield. (Abstract). *Ibid.*, pp. 41-44.
- 88 ——— and W. H. CROFTS. The Plain of Marine Denudation beneath the Drift of Holderness. (Brit. Assoc.). *Naturalist*, p. 340.
- 89 LAMPLUGH, G. W.—On the Necessity for the Amateur Spirit in Scientific Work. (Presidential Address to the Yorkshire Naturalists’ Union). *Naturalist*, pp. 71-80.

- 90 LAMPLUGH, G. W.—On British Drifts and the Interglacial Problem. (Extracts from the Address to the Geological Section, British Association, York). *Naturalist*, pp. 304-317, 360-366. [See 1907].
- 91 LOVEGROVE, E. J.—Attrition Tests of Road-Making Stones. With Petrological Descriptions by J. S. FLETT and J. A. HOWE. [Yorkshire Sandstone from Bradford, Hipperholme and Halifax, p. 41; Felspathic Sandstone from Ingleton, p. 42]. Pp. xix., 80. 4to. *London*.
- 92 LOW, J. S.—Report to the Local Government Board on the Sanitary Circumstances and Administration of the Borough of Batley. *Local Government Board Report*, No. 242. Pp. 32. Fol. *London*.
- 93 MACTURK, G. W. B.—Denudation in the South Cave District. *Trans. Hull Geol. Soc.*, vol. vi., pt. 1, pp. 40-42.
- 94 MAIR, L. W. D.—Report to the Local Government Board on the Sanitary Circumstances and Administration of the Rural District of Pocklington. Pp. 13. *Local Government Board Report* (No. 236). Fol. *London*.
- 95 MARTIN, E. A.—Coal Denudation in England. [Yorkshire, p. 370]. *Knowledge*, n.s., vol. iii., pp. 348-350, 370, 371.
- 96 ——— Sea-Erosion and Coast Protection. *Trans. S.E. Union Sci. Soc.*, pp. 35-49.
- 97 MAT[T]HEWS, E. R.—Coast-Erosion. *Geograph. Journ.*, vol. xxviii., pp. 491-495.
- 98 MILL, H. R.—[See C. Fox-Strangways].
- 99 MIVART, F. St. G.—Report to the Local Government Board on the General Sanitary Circumstances and Administration of the Urban District of Royston (Yorkshire), and upon the Prevalence of certain infectious diseases therein. Pp. 13. *Local Government Board Report* (No. 234). Fol. *London*.
- 100 MUFF, H. B.—The Airedale Glacier. (Abstract). *Trans. Leeds Geol. Assoc.*, Part 13, pp. 6, 7.
- 101 REID, C.—Coast Erosion. (Brit. Assoc. Sect. C. and D. York, 1906). *Geograph. Journ.*, vol. xxviii., pp. 487-491. *Naturalist*, pp. 327-329. [See 1907].
- 102 REYNOLDS, S. H.—A Monograph of the British Pleistocene Mammalia. Vol. ii., part 2, the Bears. [Kirkdale, p. 8].



- Pp. 35, plates viii. *Monogr. Pal. Soc.*, vol. lx., for the year 1906.
- 103 RICHARDSON, L.—Liassic Dentaliidæ. [Figured specimens from Cleveland, etc.]. *Quart. Journ. Geol. Soc.*, vol. lxii., pp. 573-596. *Geol. Mag.*, dec. v., vol. iii., p. 237. *Naturalist*, 1907, pp. 35, 36.
- 104 ROBINSON, J. F.—Resume of the Field Work done in the years 1901-4 inclusive. *Trans. Hull Geol. Soc.*, vol. vi., pt. 1, pp. 76-82.
- 105 ROTH, H. L.—The Yorkshire Coiners, 1767-1783, and Notes on Old and Prehistoric Halifax. [Prehistoric Halifax, p. 286]. Pp. xxvii., 322. 4to. *Halifax*.
- 106 ROWLEY, W.—Our Coal Resources. (Presidential Address). *Proc. Yorks. Geol. Soc.*, vol. xv., pt. 3, pp. 437-442.
- 107 SCOTT, D. H.—The Present Position of Palæozoic Botany. *Progressus Rei Botanicae*, vol. i., pp. 139-217.
- 108 ——— On the Structure of Some Carboniferous Ferns. *Journ. Roy. Micro. Soc.*, 1908, pp. 519-521.
- 109 SCOTT, RINA (Mrs. D. H.).—On the Megaspore of *Lepidostrobus foliaceus* [from the Halifax Hard Bed]. *New Phytologist*, vol. v., pp. 116-119.
- 110 SEWARD, A. C.—Jurassic Plants from the Rocks of East Yorkshire. *Geol. Mag.*, dec. v., vol. iii., p. 518. [See 1907].
- 111 SEWELL, J. T.—Notes on Glacial Deposits near Pickering. [Delta Deposits]. *Proc. Yorks. Geol. Soc.*, vol. xv., pt. 3, pp. 443-445.
- 112 ——— Notes on the 'Overflow Channel' in Newton Dale, between Lake Wheeldale and Lake Pickering. *Ibid.*, pp. 446-452.
- 113 SHEPPARD, T.—The Relationship between Provincial Museums and Local Scientific Societies. *Hull Museum Publications*, No. 36, pp. 1-6.
- 114 ——— A Scarborough Geological Collection. [Made by Mr. Lether]. *Ibid.*, No. 35, pp. 17. *Naturalist*, p. 346.
- 115 ——— Notes on some Speeton Clay Belemnites. *Naturalist*, pp. 97-99. *Hull Museum Publication*, No. 29, pp. 8.
- 116 ——— Prominent Yorkshire Workers. I.—Henry Clifton Sorby, LL.D., F.R.S., etc. [Refers to his work in York-

- shire, with list of memoirs]. *Naturalist*, pp. 137-144, 194-197, 225-230.
- 117 SHEPPARD, T.—Fossil Tusk at Bridlington. [*Elephas antiquus*]. *Ibid.*, p. 206.
- 118 ——— On a Section in the Post-Glacial Deposit at Hornsea. *Ibid.*, pp. 420-424.
- 119 ——— Humber District Geological Notes. [Enumerating recent geological finds]. *Trans. Hull Geol. Soc.*, vol. vi., pt. 1, pp. 65-69.
- 120 ——— Yorkshire Lake Dwellings. [Brief geological notes]. *Yorks. Notes and Queries*, vol. iii., pp. 99-102.
- 121 ——— East-Riding Boulder Committee's Reports. *Trans. Hull Geol. Soc.*, vol. vi., pt. 1, pp. 70-75.
- 122 ——— The Making of East Yorkshire. *London*. Pp. 29. [See 1905].
- 123 SHERBORN, C. D.—Remarks on the Irregular Echinoids of the White Chalk of England as exhibited in the British Museum (Natural History). [Yorkshire specimens noted] *Geol. Mag.*, dec. v., vol. iii., pp. 31-33.
- 124 ——— On the Belemnites of the Chalk of Yorkshire. *Nat.*, pp. 152-154.
- 125 SLATER, M. B.—[See J. G. Baker].
- 126 SMITH, W. G.—The Relation of Geology to the Vegetation of the West Riding of Yorkshire. (Abstract). *Trans. Leeds Geol. Assoc.*, part 13, pp. 26-29.
- 127 SORBY, H. C.—The Origin of the Cleveland Ironstone. *Naturalist*, pp. 354-357.
- 128 SPEIGHT, H.—Upper Nidderdale with the Forest of Knaresborough. Being a record of the History, Antiquities, Scenery, Old Homes, Families, etc., of the Romantic District. [Geology, pp. 70, 110, 130, 152, 153, 217, 245, 326, 327]. Pp. 365. Appendix, pp. lxxii. 8vo. *London*.
- 129 SPIELMANN, P. E.—On the Origin of Jet. [Yorkshire, p. 282]. *Chem. News*, vol. xciv., pp. 281-283.
- 130 STATHER, A. J.—Yorkshire Geological Photographs' Committee's Report for 1905. *Naturalist*, pp. 16, 17.
- 131 STATHER, J. W.—Yorkshire Naturalists at Flamborough. [Geological notes, pp. 241-242]. *Naturalist*, pp. 241-242.

- 132 STATHER, J. W.—The Fossiliferous Drift Deposits at Kirmington, Lincolnshire, and at various localities in the East Riding of Yorkshire. [The Speeton Shell-bed]. *Naturalist*, pp. 341, 342.
- 133 ——— Goodmanham Dale. (Abstract). *Trans. Hull Geol. Soc.*, vol. vi., pt. 1, p. 37.
- 134 ——— The Drift Deposits of Kirmington and Great Limber, Lincolnshire. [Holderness]. *Ibid.*, pp. 28-32.
- 135 ——— Quartzite pebbles on the Yorkshire Wolds. *Ibid.*, pp. 38-40.
- 136 ——— East Riding Boulder Committee's Reports. [1901-1904]. *Ibid.*, pp. 70-75.
- 137 ——— Investigation of the Fossiliferous Drift Deposits at Kirmington, Lincolnshire, and at various localities in the East Riding of Yorkshire. [Bielsbeck, Speeton]. *Rep. Brit. Assoc.* for 1905, p. 160.
- 138 STEVENSON, W.—The Roman Villa at Harpham, from the Builder's Point of View. [Geological Notes]. *Hull Museum Publication*, No. 23, pp. 22-24.
- 139 STOBBS, J. T.—The Value of Fossil Mollusca in Coal Measure Stratigraphy. [Yorkshire Coalfield, p. 329]. *Trans. Manchester Geol. Soc.*, vol. xxix., pt. 6, pp. 323-338. Discussion, pp. 338-344. Further discussion, vol. xxx., pt. iv., pp. 73-80. *Trans. Inst. M.E.*, vol. xxxi., p. 485.
- 140 ——— [See W. Hind].
- 141 ——— [See J. Ward].
- 142 STOPES, Miss M. C.—Coal-Balls found in Coal Seams. *Naturalist*, pp. 336-337; *Rep. Brit. Assoc.* for 1906, pp. 747, 748.
- 143 TOBEY, H.—The Water Supply of Filey, Yorkshire. [Analyses]. *Summary of Progress Geol. Survey* for 1905, pp. 196, 197.
- 144 TONGE, J.—The Principles and Practice of Coal Mining. [Maps and Sections]. Pp. viii., 363. 8vo. *London*.
- 145 VAUGHAN, A.—[See Cosmo Johns].
- 146 WARD, J., and J. T. STOBBS.—A Newly-discovered Fish-bed in the Cheadle Coalfield; with notes on the distribution of Fossil Fishes in that District. [Yorkshire speci-

- mens, pp. 96, 97]. *Ann. Rep. Trans. North Staffordshire Field Club*, 1905-1906, vol. xl., pp. 87-101.
- 147 WATTS, W.—Geological Notes on sinking the Langsett and Underbank Concrete-Trenches in the Little Don Valley [near Penistone]. *Trans. Inst. Min. Eng.*, vol. xxxi., pp. 668-678, Discussion, pp. 678-680; *Trans. Manchester Geol. Soc.*, vol. xxix., pp. 440-452; *Naturalist*, 1907, p. 66; *Water*, vol. ix., pp. 101-106, 1907.
- 148 WEISS, F. E.—The Occurrence, Distribution, and Mode of Formation of the Calcareous Nodules found in Coal Seams of the Lower Coal-Measures. *Naturalist*, pp. 343-344, [See 1907].
- 149 ——— A Stigmaria of Unusual Type. [Halifax Hard Bed]. *Naturalist*, p. 344. [See 1907].
- 150 WELLBURN, E. D.—Fish Fauna of the Lower Carboniferous Rocks of Yorkshire. *Proc. Yorks. Geol. Soc.*, vol. xv., pt. 3, pp. 380-387.
- 151 WHEELER, W. H.—A Practical Manual of Tides and Waves. [Humber estuary]. Pp. viii., 201. 8vo. *London*.
- 152 WILKINSON, J.—Mammalian Remains in East Yorkshire. *Naturalist*, p. 36.
- 153 WILMORE, A.—The Limestone Knolls of Craven. *Naturalist*, pp. 331, 332. [See 1907].
- 154 WISEMAN, W. R. B.—The Effect of Fire on Building Stones. [Leeds and Bradford Stone]. *Trans. Surveyors' Inst.*, vol. xxxviii., pp. 373-429, Discussion, pp. 430-442; *Quarry*, vol. xi., pp. 355-358, 407-412, 454-456.
- 155 WOODS, H.—A Monograph of the Cretaceous Lamelli-branchiata of England. [Speeton, pp. 97, 107, 116]. Vol. ii.; pt. 3, pp. 97-132; plates xii.-xix. *Monogr. Pal. Soc.*, vol. lx. for the year 1906.

1907.

- 1 ANON.—John Francis Walker, M.A., F.L.S., F.I.C., F.C.S., F.G.S. Obituary. [List of published papers]. *Geol. Mag.*, dec. v., vol. iv., pp. 380-384.
- 2 ——— Seaside Resorts and their Natural History. Cleethorpes, Coast of Isle of Man, Bridlington Quay, Filey,

- Whitby. [Brief geological notes]. *Museum Gazette*, Aug. pp. 125-133.
- 3 ANON.—A Deformed Belemnite. [*B. jaculum* from Speeton]. *Naturalist*, p. 132.
- 4 ——— *Dentalium giganteum* [from Robin Hood's Bay]. *Ibid.*, p. 228.
- 5 ——— Holderness Gravels. [Kelsey Hill]. *Ibid.*, pp. 303, 304.
- 6 ——— Yorkshire Fossil Plants. [Threshfield, near Grassington]. *Ibid.*, p. 305.
- 7 ——— Royal Commission on Coast Erosion. Vol. i., pt. 2. Minutes of Evidence and Appendices thereto accompanying the first report [vol. i., pt. 1] of the Royal Commission appointed to enquire into and report on certain questions affecting coast erosion and Reclamation of Tidal Land in the United Kingdom. Pp. 504+516.
- 8 ——— First Report of the Royal Commission appointed to enquire into and to report on certain questions affecting Coast Erosion and the Reclamation of Tidal Sands in the United Kingdom. Minutes and Appendices. Vol. i., pp. 504, 516. Fol. *London*. Second Report, 1909.
- 9 ASHWORTH, J. H.—Geology. [Brief report]. *Bradford Sci. Journ.*, No. 11, pp. 349-350, vol. ii., pp. 87, 88.
- 10 ATKINSON, J. C.—Forty Years in a Moorland Parish, reminiscences and researches in Danby-in-Cleveland. [Descriptive and geological, pp. 181-201]. Ed. 3. Pp. xlvii., 471. 8vo. *London*. [First ed. in 1891].
- 11 BAKER, E. A., and H. E. BALCH.—The Netherworld of Mendip. Explorations in the Great Caverns of Somerset, Yorkshire, Derbyshire, and Elsewhere. [Notes on Yorkshire Caves, pp. 29, 35, 44] Pp. xii., 172. 8vo. *Clifton*.
- 12 BALCH, H. E.—[See E. A. Baker].
- 13 BATHER, F. A.—Guide to the Fossil Invertebrate Animals in the Department of Geology and Palæontology in the British Museum (Natural History). Pp. ix., 182. 8vo. *London*. Ed. 1, 1897.
- 14 BJÖRLING, P. R., and F. T. GISSING.—Peat: its Uses and Manufacture. [Yorkshire, p. 13]. Pp. xii., 173. 8vo. *London*.

- 15 BLAKE, J. F.—A Monograph of the Fauna of the Cornbrash. [*Dentalium glabellum*]. Pp. 101, 102, and index. *Monogr. Pal. Soc.*, vol. lxi. for the year 1907.
- 16 BONNEY, T. G.—On the Origin of the British Trias. *Proc. Yorks. Geol. Soc.*, vol. xvi., pt. 1, pp. 1-14.
- 17 ——— J. LOMAS, T. H. HOLLAND, and G. A. J. COLE.—Discussion on the Origin of the Trias. *Rep. Brit. Assoc.* for 1906, pp. 574-576.
- 18 BOULTON, W. S.—Practical Coal-Mining. [Yorkshire, vol. i., pp. 18, 32, 56]. 3 vols. 8vo. *London*.
- 19 BRODRICK, H.—On Faults as a Predisposing Cause of the Existence of Pot-holes on Ingleborough. *Rep. Brit. Assoc.* for 1906, pp. 559, 560 ; *Naturalist*, 1906, pp. 323, 324 ; *Geol. Mag.*, dec. v., vol. iii., pp. 517, 518.
- 20 ——— and C. A. HILL.—Notes on a recently discovered Skeleton in Scoska Cave, Littondale. *Rep. Brit. Assoc.* for 1908, pp. 698-699.
- 21 BROUGH, B. H.—Iron Ore Supplies. *Geol. Mag.*, dec. v., vol. iv., pp. 448-451 ; *Naturalist*, p. 304.
- 22 BUCKMAN, S. S.—A Monograph of the Ammonites of the 'Inferior Oolite Series.' Vol. i. Pp. 1-5, 1-8, and ccix.-cclxii., including Index. *Monogr. Pal. Soc.*, vol. lxi. for the year 1907.
- 23 BURTON, J. J.—Naturalists at Guisborough. *Naturalist*, p. 65. [See 1906].
- 24 CAREY, A. E.—The Protection of the Sea Shores from Erosion. *Journ. Soc. Arts*, vol. lv., pp. 650-663, Discussion, pp. 664-667. Also separately, pp. 36. 8vo. *London*.
- 25 CARTER, W. L.—Secretary's Report, 1905. [Excursion to the Hambleton Hills]. *Proc. Yorks. Geol. Soc.* for 1906, vol. xvi., pt. 1, pp. 115-135.
- 26 ——— Honorary Secretary's Report, 1906. [Excursions to Pateley Bridge and Helmsley]. *Ibid.*, vol. xvi., pt. 2, pp. 205-221.
- 27 CHAPMAN, F.—Calcareous Nodules [of Yarra and Yorkshire Coal-Balls]. *Geol. Mag.*, dec. v., vol. iv., pp. 479, 480. [See M. C. Stopes].
- 28 COLE, G. A. J.—[See T. G. Bonney].
- 29 COLLIER, C. V.—Stovin's Manuscript—a Transcript, pt. 2.

- [Refers to peat at Thorne, etc.]. *Trans. E. Rid. Antiq. Soc.*, vol. xvi., pt. 2, pp. 197-245.
- 30 CORBETT, H. H.—Remains of *Bos primigenius*, near Doncaster. [Loversal]. *Naturalist*, p. 133.
- 31 CRAMPTON, C. B.—Fossils and Condition of Deposit. A Theory of Coal Formation. *Trans. Edinburgh Geol. Soc.*, vol. ix., pt. 1, pp. 73-92.
- 32 [CUDWORTH, W.].—Extracts from the Note Books of the late Mr. W. Cudworth. [Details of sections in the Bradford area]. *Bradford Sci. Journ.*, No. 13, pp. 22-25.
- 33 CULPIN [H.].—Geology between Crowle and Thorne. Excursion of the Yorkshire Naturalists' Union]. *Naturalist*, pp. 317-318.
- 34 — and G. GRACE.—Recent Exposure of Glacial Drift at Doncaster and Tickhill. *Rep. Brit. Assoc. for 1906*, p. 559 ; *Naturalist*, 1906, pp. 325-327.
- 35 DANFORD, C. G.—Notes on Speeton Ammonites. *Proc. Yorks. Geol. Soc.*, vol. xvi., pt. 1, pp. 101-114, plates x.-xiv. ; *Rep. Brit. Assoc. for 1906*, pp. 560, 561 ; *Naturalist*, 1906, pp. 330, 331 ; *Geol. Mag.*, dec. v., vol. iv., pp. 520, 521.
- 36 DAVIES, E. B.—The Structure of some Carboniferous Plants. [Species from the Halifax Hard Bed and the Gannister Beds of Sheffield]. *Proc. Liverpool Geol. Assoc.*, n. ser., No. 2, pp. 10-15.
- 37 DAWKINS, W. B.—[The Discovery of Saurian remains near Whitby, by Mr. Sutcliffe]. *Trans. Manchester Geol. Min. Soc.*, vol. xxx., pp. 131, 132.
- 38 DRAKE, H. C.—Remains of *Gyrodus* from the Coral Rag. of East Yorkshire. *Trans. Hull Field Nat. Club*, vol. iii., pt. 4, p. 290.
- 39 DURNFORD, H. ST. JOHN.—Deep Boring at Barlow, near Selby. *Trans. Inst. Min. Eng.*, vol. xxxiv., pp. 426-438, Discussion, pp. 438-448.
- 40 DWERRYHOUSE, A. R.—Excursions, 1907. [Of the Yorkshire Geological Society to Thornton, Shipton, and Pickering]. *Proc. Yorks. Geol. Soc.*, vol. xvi., pt. 2, pp. 229-243.

- 41 ELGEE, F.—The Driftless area of North-East Yorkshire and its relation to the Geographical Distribution of Certain Plants and Insects. *Naturalist*, pp. 137-143.
- 42 ——— Glacial Survivals. *Ibid.*, pp. 274-276, 314, 315.
- 43 ——— The Origin of the Cleveland Moors. (Cleveland Nat. Field Club). Pp. 12. 8vo. *Middlesbrough*.
- 44 ELSDEN, J. V.—[See A. Greenwell].
- 45 FARRAR, R.—Report to the Local Government Board on the Sanitary Circumstances and Administration of the Urban District of Whitby. *Local Government Board Report*, No. 287, pp. 15. Fol. *London*.
- 46 FLETCHER, W. W. E.—Report to the Local Government Board upon the Sanitary Circumstances and Administration of the Leyburn Rural District. *Local Government Board Report*, No. 279, pp. 10. Fol. *London*.
- 47 FOX-STRANGWAYS, C.—Geology of North-East Yorkshire in relation to the Water Supply of the District. *Trans. Assoc. Water Eng.*, vol. xi., pp. 113-130.
- 48 GARWOOD, E. J.—The Faunal Sequence in the Lower Carboniferous Rocks of Westmorland and the adjacent areas of West Yorkshire and North Lancashire. *Rep. Brit. Assoc.* for 1906, pp. 564-566.
- 49 ——— Notes on the Faunal Succession in the Carboniferous Limestone of Westmorland and Neighbouring Portions of Lancashire and Yorkshire. *Geol. Mag.*, dec. v., vol. iv., pp. 70-74.
- 50 GERRARD, J.—Horizontal and Vertical Sections of Coal-Measures from Rishton, Lancashire, to Pontefract, Yorkshire. *Trans. Manchester Geol. Min. Soc.*, vol. xxx., pt. 4, pp. 71, 72.
- 51 GISSING, F. T.—[See P. R. Bjorling].
- 52 GRACE, G.—[See H. Culpin].
- 53 GREENWELL, A.—Digest of the Evidence given before the Royal Commission on Coal Supplies, 1901-1905 [reproduced from the *Colliery Guardian*], vol. iii., pp. 209. *London*. [See under 1905].
- 54 ——— and J. V. ELSDEN.—Analyses of British Coals and Coke and the Characteristics of the Chief Coal Seams worked in the British Isles, with Commercial Indexes and Maps. With an Introduction by C. A.



- SYLER. [Yorkshire, pp. 176-231, 434-438]. Pp. xl., 456. 4to. London.
- 55 GREENWOOD, J. H. Y.—Geology. [Brief report on local work]. *Hebden Bridge Lit. Sci. Soc.*, pp. 13, 14.
- 56 GREGORY, E. E.—The Diversion of a Wharfedale Stream into Airedale. *Bradford Sci. Journ.*, No. 12, pp. 371-373. Map.
- 57 ——— Striated Rock Surface on Harden Moor, near Bingley. *Proc. Yorks. Geol. Soc.*, vol. xvi., pt. 1, p. 26.
- 58 ——— Striated Rock Surface in Ribblesdale [near Horton]. *Naturalist*, p. 402.
- 59 HALL, F.—The Ice Age in Wharfedale. *Bradford Sci. Journ.*, No. 11, pp. 328-333.
- 60 HARMER, F. W.—On the Origin of Certain Cañon-like Valleys associated with Lake-like Areas of Depression. [Map showing Pleistocene Deposits in South Yorkshire]. *Quart. Journ. Geol. Soc.*, vol. lxiii., pp. 470-514.
- 61 ——— The Glacial Deposits of the East of England. *Rep. Brit. Assoc. for 1906*, pp. 570-572; *Geol. Mag.*, dec. v., vol. iv., pp. 468-470.
- 62 ——— Lake Oxford and the Goring Gap. [Vale of York glacier]. *Rep. Brit. Assoc. for 1906*, pp. 572, 573; *Geol. Mag.*, dec. v., vol. iv., pp. 470, 472.
- 63 [HAWELL, J.].—Notes by the Rev. J. Hawell, M.A., F.G.S. Extracted from 'The Stokesley and Ingleby Greenhow Magazine,' 1887-1902. *Proc. Cleveland Nat. Field Club*, vol. ii., pt. 2, pp. 85-105.
- 64 HICKLING, G.—Carboniferous Flora as an aid in Stratigraphical Classification. [Vertical section of Yorkshire strata]. *Trans. Manchester Geol. Min. Soc.*, vol. xxx., pp. 138-142.
- 65 HILL, C. A.—[See H. Brodrick].
- 66 HIND, WHEELTON.—Life Zones in the British Carboniferous Rocks. Pt. 2. The Fossils of the Millstone Grit and Pendleside Series. *Naturalist*, pp. 17-23 and 90-96 (plate).
- 67 ——— Life-zones in British Carboniferous Rocks. Interim Report of the Committee. (With a note by A. VAUGHAN). [Yorkshire, p. 308]. *Rep. Brit. Assoc. for 1906*, pp. 302-313; *Naturalist*, 1906, pp. 333-336. [See also p. 305].

- 68 HIND, WHEELTON.—Life-Zones in the British Carboniferous Rocks. (Abstract of *Brit. Assoc. Rep.* for 1907). *Geol. Mag.*, dec. v., vol. iv., pp. 465, 466.
- 69 ——— Speculations on the Evolution of the River Trent. *Ann. Rep. Trans. North Stafford. Field Club*, vol. xli., pp. 93-100.
- 70 ——— On the Occurrence of Dendroid Graptolites in British Carboniferous Rocks. [*Callograptus carboniferus*, sp. nov. from Pendle Hill]. *Proc. Yorks. Geol. Soc.*, vol. xvi., pt. 2, pp. 155-157.
- 71 HENSLow, G.—On the Xerophytic Characters of certain Coal-plants, and a Suggested Origin of Coal-Beds. *Quart. Journ. Geol. Soc.*, vol. lxiii., pp. 282-293; Abstract, *Geol. Mag.*, dec. v., vol. iv., pp. 330, 331.
- 72 HOLLAND, T. H.—[See T. G. Bonney].
- 73 HOWARTH, J. H.—Honorary Secretary's Report. *Proc. Yorks. Geol. Soc.*, vol. xvi., pt. 2, pp. 222-228.
- 74 HUGHES, T. McK.—Ingleborough. Pt. 4. Stratigraphy and Palæontology of the Silurian. *Proc. Yorks. Geol. Soc.*, vol. xvi., pt. 1, pp. 45-74. Pt. 5. Devonian and Carboniferous. *Ibid.*, pt. 2, pp. 177-196.
- 75 JOHNS, C.—Yorkshire Naturalists at Robin Hood's Bay. [Geological notes]. *Naturalist*, pp. 250, 251.
- 76 ——— Notes on the Carboniferous Rocks of the Kettlewell District. *Ibid.*, pp. 281-283.
- 77 JOHNSTONE, M ss M. A.—The Ancestors of the Angiosperms. *Ibid.*, pp. 338-341.
- 78 JONES, T. A.—Microscopical Characteristics of some Carboniferous Limestones. (Abstract). *Proc. Liverpool Geol. Assoc.*, n. ser., No. 1, pp. 25-28.
- 79 KENDALL, P. F.—Geology [of Yorkshire] *The Victoria History of the County of York*, Vol. i., pp. 1-97. 4to. London. Reviewed in *Naturalist*, pp. 181-186, 217, 218.
- 80 ——— Geological Notes on the Robin Hood's Bay District. *Naturalist*, pp. 177-179.
- 81 LAMPLUGH, G. W.—On British Drifts and the Interglacial Problem. Presidential Address to Section C. [East Yorkshire, pp. 540-547] *Rep. Brit. Assoc.* for 1906, pp. 532-558; *Naturalist*, 1906, pp. 304-317, 360-366.

- 82 LANG, W. D.—The Evolution of *Estomatopora dichotomoides* (d'Orbigny). [Cornbrash of Scarborough]. *Geol. Mag.*, dec. v., vol. iv., pp. 20-24.
- 83 LAPWORTH, C.—The Hidden Coal-Fields of the Midlands. [Yorkshire noticed]. *Trans. Inst. Min. Eng.*, vol. xxxiii., pp. 26-51; Abstract in *Min. Journ.*, vol. lxxxi., p. 245.
- 84 LEWIS, F. J.—The Sequence of Plant Remains in the British Peat Mosses. *Sci. Progress*, vol. ii., pp. 307-325.
- 85 LOMAS, J.—Desert Conditions and the Origin of the British Trias. *Proc. Liverpool Geol. Soc.*, vol. x., pt. 3, pp. 172-197; *Geol. Mag.*, dec. v., vol. iv., pp. 511-514, 554-563.
- 86 ——— On the Origin of the Trias. *Proc. Yorks. Geol. Soc.*, vol. xvi., pt. 1, pp. 15-18, Discussion, pp. 19-20.
- 87 ——— [See T. G. Bonney].
- 88 LOW, J. S.—Report to the Local Government Board upon the Sanitary Circumstances and Administration of the Borough of Morley, with special reference to the continued prevalence of infectious diseases. *Local Government Board Report*, No. 275, pp. 27. Fol. London.
- 89 LYDEKKER, R.—Palæontology [of the County of York] *The Victoria History of the County of York*, vol. i., pp. 99-110. 4to. London.
- 90 MARGERISON, S.—The Vegetation of some Disused Quarries. [With Geological notes]. *Bradford Sci. Journ.*, No. 12, pp. 359-364, vol. ii., pp. 75-84, 141-147, 161-168, 206-214, 235-245; 1907-1909.
- 91 MASLEN, A. J.—[See Scott, D. H.].
- 92 MORRIS, M. C. F.—Nunburnholme: its History and Antiquities. [Geology, pp. 1-6]. Pp. vi., 312. 8vo. London.
- 93 NEWTON, E. T.—Note on Specimens of 'Raxella Chert' or 'Angrove Stone' from Dartford Heath. [Probably derived from Yorkshire]. *Proc. Geol. Assoc.*, vol. xx., pt. 2, pp. 127, 128.
- 94 NEWTON, R. B.—Relics of Colouration in Fossil Shells. [*Mourlonia carinata* from Yorkshire]. *Proc. Malacol. Soc.*, vol. vii., pt. 5, pp. 280-292.
- 95 OLIVER, W. F.—The Seed, a Chapter in Evolution. [Presidential Address to Section K]. *Rep. Brit. Assoc.*, for 1906, pp. 725-738.

- 96 PAGE, WILLIAM (edited by).—The Victoria History of the County of York, vol. i. [includes chapters on the Geology, by P. F. KENDALL, and Palæontology by R. LYDEKKER], pp. xxiv.+523.
- 97 PRATT, A. E.—The Ironstone of Cleveland. *Trans. Inst. Mining and Metall.*, vol. xvi., pp. 328-336, Discussion, pp. 337-340.
- 98 PRITCHARD, S. H.—The Flora of the Coal-Measures in relation to the Flora of to-day. *Proc. Liverpool Geol. Assoc.*, n. ser., No. 2, pp. 3-6.
- 99 RASTALL, R. H.—The Ingletonian Series of West Yorkshire. *Proc. Yorks. Geol. Soc.*, vol. xvi., pt. 1, pp. 87-100.
- 100 REID, C.—Coast Erosion. *Rep. Brit. Assoc. for 1906*, pp. 621, 622; *Naturalist*, 1906, pp. 327-329; *Geog. Journ.*, vol. xxviii., pp. 487-491.
- 101 SCOTT, D. H.—The Flowering Plants of the Mesozoic Age, in the Light of Recent Discoveries. *Journ. Roy. Mic. Soc.*, pp. 129-141.
- 102 ——— and A. J. MASLEN.—On the Structure of the Palæozoic Seeds, *Trigonocarpus Parkinsoni*, Brongniart, and *T. Oliveri*, sp. nov. Part 1. *Annals of Botany*, vol. xxi., pp. 89-134.
- 103 SEWARD, A. C.—The Jurassic Plants from the Rocks of East Yorkshire. *Rep. Brit. Assoc. for 1906*, pp. 568, 569; *Geol. Mag.*, dec. v., vol. iv., p. 518.
- 104 SCHARFF, R. F.—European Animals: their Geological History and Geographical Distribution. Pp. xiv., 258. 8vo. *London*. Reviewed in *Geol. Mag.*, dec. v., vol. iv., pp. 366-371.
- 105 SHEPPARD, T.—The Cliffs and Birds of Bempton. [Brief geological notes]. *Yorks. Notes and Queries*, vol. iv. No. 5, pp. 104-111. [Also printed separately].
- 106 ——— On a Section in a Post-glacial Lacustrine Deposit at Hornsea. *Rep. Brit. Assoc. for 1906*, p. 581; *Naturalist*, 1906 pp. 420-424.
- 107 ——— Yorkshire Naturalists at Robin Hood's Bay. [Geological notes]. *Naturalist*, 198-202, 250-255, 284, 285.
- 108 ——— Recent Geological Discoveries at Speeton. [*Perisphinctes lacertosus*]. *Ibid.*, pp. 277-279; *Hull Museum Publication*, No. 44, p. 21.

- 109 SHEPPARD, T.—Yorkshire Naturalists at South Cave. [Brief geological notes]. *Naturalist*, pp. 286-289.
- 110 ——— The Natural History of Littondale, Yorks. [Brief geological notes]. *Ibid.*, pp. 342-353.
- 111 ——— *Dentalium giganteum* [from Robin Hood's Bay]. *Hull Museum Publication*, No. 44, p. 228.
- 112 ——— Querns. [Traces Geological Source of Stones]. *Ibid.*, No. 42, pp. 3-6.
- 113 ——— Interesting find in East Yorkshire. [Elephant Molar at Brough]. *Ibid.*, No. 45, p. 20.
- 114 ——— Notes on the More Important Archæological Discoveries in East Yorkshire. [Geological notes]. *Trans. East Riding Antiq. Soc.*, vol. xiv., pp. 45-66; Reprinted as *Hull Museum Publication*, No. 46, pp. 22.
- 115 ——— Note on a British Chariot Burial at Hunmanby, in East Yorkshire. [Brief Geological notes]. *Yorks. Arch. Journ.*, pt. 76, pp. 482-488; *Hull Museum Publication*, No. 43, pp. 3-8; and No. 47, pp. 481-488.
- 116 ——— and J. W. STATHER.—Note on a New Section in the Glacial Gravels of Holderness. (Brit. Assoc. for 1907). *Geol. Mag.*, dec. v., vol. iv., p. 468. [See 1908].
- 117 ——— ——— Note on a New Section in the Glacial Drifts of Holderness. [Kelsey Hill]. *Proc. Yorks. Geol. Soc.*, vol. xvi., pt. 2, pp. 171-176; *Naturalist*, pp. 303, 304.
- 118 SLATER, I. L.—A Monograph of British *Conulariæ*. [*Conularia quadrisulcata*, Carboniferous Limestone, Yorkshire, p. 25]. Pp. 1-41; plates i.-v. *Monogr. Pal. Soc.*, vol. lxi. for the year 1907.
- 119 SMITH, S.—The Cleveland Dyke. [Analyses]. *Proc. Univer. Durham Phil. Soc.*, vol. ii., pt. 6, pp. 239-242.
- 120 STANLEY, S. S.—Origin of Gypsum Beds and Medicinal Springs in a Line Across England from N.E. to S.W. (Scarborough to Bath). *Proc. Warwickshire F. Club*, pp. 13-20.
- 121 STATHER, J. W.—Investigation of the Fossiliferous Drift Deposits at Kirmington, Lincolnshire, and at various localities in the East Riding of Yorkshire.—Report of the Committee. [Speeton Shell-bed]. *Rep. Brit. Assoc. for 1907*, pp. 313, 314; *Geol. Mag.*, dec. v., vol. iv., pp. 3738, 471-474.

- 122 STATHER, J. W.—[See T. Sheppard].
- 123 STOPES, M. C.—The Flora of the Inferior Oolite of Brora (Sutherland). [Compared with that of Yorkshire]. *Quart. Journ. Geol. Soc.*, vol. lxxiii., pp. 375-382 ; *Abstract Geol. Mag.*, dec. v., vol. iv., p. 376.
- 124 ——— The Relation of the Concretionary Nodules of the Yarra to the Calcareous Nodules known as Coal-Balls. [Described by F. Chapman, *Geol. Mag.*, 1907]. *Geol. Mag.*, dec. v., vol. iv., pp. 106-108.
- 125 SUMMER, E. J.—The Bride Stones, Cleveland Hills. [Photograph]. *Knowledge*, n. ser., vol. iv., p. 34.
- 126 SYLER, C. A.—[See A. Greenwell].
- 127 TONGE, J.—Coal. [The Yorkshire, Derbyshire, and Nottinghamshire Basin, pp. 93, 94]. Pp. vi., 275. 8vo. *London*.
- 128 TRAQUAIR, R. H.—The Ganoid Fishes of the British Carboniferous Formations.—Pt. 1, Palæoniscidæ, No. 3. [*Elionichthys obliquus*, from Halifax, p. 91]. Pp. 87-106 ; plates xix.-xxiii. *Monogr. Pal. Soc.*, vol. lxi., for the year 1907.
- 129 TRAVIS, C. B.—Settle and Clapham. [Excursion]. *Proc. Liverpool Geol. Assoc.*, n. ser., No. 2, pp. 46-49.
- 130 VAUGHAN, A.—A Note on the Carboniferous Sequence in the neighbourhood of Pateley Bridge. *Proc. Yorks. Geol. Soc.*, vol. xvi., pt. 1, pp. 75-83.
- 131 ——— [See Wheelton Hind].
- 132 VEITCH, W. J.—Exposure of New Red Sandstone at Middlesbrough. *Naturalist*, Jan., pp. 31, 32.
- 133 WADE, A.—The Ebbing and Flowing Well at Giggleswick. An Explanation of its action. *Proc. Liverpool Geol. Assoc.*, n. ser., No. 2, pp. 32-34 ; Compare *Naturalist*, pp. 196, 197.
- 134 WATSON, D. M. S.—On a Confusion of Two Species (*Lepidodendron harcourtii* Witham, and *L. hickii* sp. nov.) under *Lepidodendron harcourtii* Witham, in Williamson's XIX. Memoir ; with a Description of *L. hickii* sp. nov. *Mem. Proc. Manchester Lit. Phil. Soc.*, vol. li., pt. 3, No. 13, pp. 28.
- 135 ——— The Formation of Coal-Balls in the Coal-Measures. [Halifax Hard Bed]. *Trans. Manchester Geol. Min. Soc.*, vol. xxx., pp. 135-137, Discussion, pp. 220, 221 ; *Trans. Inst. Min. Eng.*, vol. xxxiv., pp. 177, 178.

- 136 WATTS, W.—Geological Notes on . . . the Little Don Valley. *Naturalist*, p. 66. *Water*, vol. ix., pp. 101-106. [See 1906].
- 137 WEBER, H. and F. P.—The Mineral Waters and Health Resorts of Europe [Harrogate]. Ed. 3, pp. 833. [See 1898].
- 138 WEISS, F. E.—On the Occurrence, Distribution, and Mode of Formation of the Calcareous Nodules found in Coal-Seams of the Lower Coal-Measures. [Halifax Hard Bed]. *Rep. Brit. Assoc. for 1906*, pp. 746, 747; *Naturalist*, 1906, pp. 343, 344.
- 139 — A Stigmæria of Unusual Type. *Rep. Brit. Assoc. for 1906*, p. 344.
- 140 — The Parichnos of the Lepidodendronæ. *Mem. Proc. Manchester Lit. Phil. Soc.*, vol. li., No. 8, pp. 22.
- 141 WELLBURN, E. D.—A List of the Fossil Fishes of the Carboniferous Rocks of Yorkshire, with their Distribution. *Proc. Yorks. Geol. Soc.*, vol. xvi., pt. 2, pp. 199-204.
- 142 WHEATON, S. W.—Report to the Local Government Board on the Sanitary Circumstances and Administration of the Helmsley Rural District. *Local Government Board Report*, No. 277, pp. 11. Fol. London.
- 143 WHEELER, W. H.—The North Sea : its Physical Characteristics, Tides, and Currents. [Map of the North Sea and Straits of Dover]. *Engineer*, vol. ciii., pp. 489-490, 516, 517; also pp. 41. 8vo. London.
- 144 WILMORE, A.—A Contribution to our Knowledge of the Limestone Knolls of Craven. *Rep. Brit. Assoc. for 1906*, pp. 563, 564; *Naturalist*, 1906, pp. 331, 332.
- 145 — The Structure of Some Craven Limestones. Pt. 1. *Proc. Yorks. Geol. Soc.*, vol. xvi., pt. 1, pp. 27-44.
- 146 — The Structure of Some Craven Limestones. Pt. 2. On the Structure and Origin of the Craven Limestone Knolls. *Ibid.*, pt. 2, pp. 158-170. Map.
- 147 WISEMAN, W. R. B.—The Influence of Pressure and Porosity on the Motion of Sub-Surface Water. *Quart. Journ. Geol. Soc.*, vol. lxiii., pp. 80-105.
- 148 WOODS, H.—A Monograph of the Cretaceous Lamelli-branchiata of England Vol. ii., pt. 4. [Specimens from Speeton, pp. 137, 154, 169]. Pp. 133-180; plates xx.-xxvii. *Monogr. Pal. Soc.*, vol. lxi., for the year 1907.

- 149 WOODWARD, H.—On a Carboniferous Trilobite from Angram, in Nidderdale. [*Griffithides barkei* H. Woodw.]. *Proc. Yorks. Geol. Soc.*, vol. xvi., pt. 1, pp. 84-86; *Naturalist*, p. 133.
  - 150 ——— A Guide to the Fossil Invertebrates and Plants . . . . in the British Museum. Ed. 2. [See 1897].
  - 151 WOODWARD, H. B.—Stanford's Geological Atlas of Great Britain and Ireland. With plates of Characteristic Fossils, preceded by Descriptions of the Geological Structure of Great Britain and Ireland and their counties; and of the Features observable along the principal lines of railway. Ed. 2. Pp. 189. Plates 1. 8vo. *London*. Ed. 1, 1904.
  - 152 WROOT, H. E.—Yorkshire Earthquakes. [Thirsk]. *Naturalist*, p. 257.
  - 153 YAPP, R. H.—Peat Moss Deposit.—Interim Report of the Committee. [Tees Valley]. *Rep. Brit. Assoc.* for 1906, pp. 430, 431.
- 1908.
- 1 ANON. (A. G.).—Henry Clifton Sorby, 1826-1908. [Obituary Notice]. *Proc. Roy. Soc.*, ser. B., vol. lxxx., pp. lvi.-lxvi.
  - 2 ASHWORTH, J. H.—Geology [report upon]. *Bradford Sci. Journ.*, No. 15, Jan., pp. 87-88.
  - 3 BALL, L. C.—Notes on a Yorkshire Colliery. [Cadeby Colliery]. *Queensland Government Mining Journal*, vol. ix., pp. 556-558.
  - 4 BOGG, E.—Richmondshire: An Account of its History and Antiquities, Characters and Customs, Legendary Lore, and Natural History, being a companion volume to 'the Vale of Mowbray.' [Geology (including 'A Geological Sketch of Richmondshire,' by J. C. FOWLER), pp. 1-7, 215, 234, 244, 346, 352, 412]. Pp. xxiii., 696. 8vo. *Leeds and London*.
  - 5 BONNEY, T. G.—On the Evidence for Desert Conditions in the British Trias. *Geol. Mag.*, dec. v., vol. v., pp. 337-341.
  - 6 BRAUNS, REINHARD, and L. J. SPENCER.—The Mineral Kingdom. 4to. [Parts 1-3, pp. 1-72] issued during 1908.



- 7 BREARE, W. H.—Guide to Harrogate. [See 1891].
- 8 [BRODRICK, H.].—A Find!!! [Footprints in Sandstone at Saltwick]. *Eighty-fifth Rep. Whitby Lit. Phil. Soc.* for 1907, pp. 8, 9.
- 9 BRODRICK, HAROLD.—Note on Two Footprint Casts from the Inferior Oolite in the Neighbourhood of Whitby, Yorks. *Thirteenth Report. Southport Soc. of Nat. Sci.*, pp. 42-44.
- 10 BROUGH, B. H.—Iron Ore Supplies. [Cleveland]. *Rep. Brit. Assoc.* for 1907, pp. 507-509.
- 11 ——— Henry Clifton Sorby. Obituary. *Journ. Iron and Steel Inst.*, vol. lxxvi., pp. 217-219.
- 12 BROWN, G. H.—Victoria Cave, Its History and Exploration. Ed. 2. *Settle*. Pp. 32.
- 13 CARRUTHERS, R. G.—A Revision of some Carboniferous Corals. [*Zaphrentis omalioni*, from Clitheroe, pp. 28, 29, 31]. *Geol. Mag.*, dec. v., vol. v., pp. 20-31, 63-74, 158-171.
- 14 CULPIN, H.—Marine Beds in the Coal-Measures near Doncaster. [Brodsworth]. *Naturalist*, pp. 39-40; *Geol. Mag.*, dec. v., vol. v., pp. 148-149.
- 15 ——— Marine Beds in the Yorkshire Coal-measures above the Barnsley Coal. *Geol. Mag.*, April, pp. 148-149.
- 16 DAVISON, C.—On some minor British Earthquakes of the years 1904-1907. *Geol. Mag.*, dec. v., vol. v., pp. 296-309.
- 17 DICK, A. B.—Supplementary Notes on the Mineral Kaolinite. [Hambleton Quarry, Bolton Abbey]. *Min. Mag.*, vol. xv., No. 69, pp. 124-127.
- 18 DICKENSON, J.—Deviation of Bore-Holes. [Barlow]. *Trans. Manchester Geol. Soc.*, vol. xxx., pp. 290-293. [See Durnford, 1907].
- 19 DURNFORD, H. ST. JOHN.—Deep Boring at Barlow, near Selby. *Trans. Inst. Mining Eng.* for 1907, vol. xxxiv., pp. 426-438, Discussion, pp. 438-448.
- 20 DYKES, R.—[See W. Goodchild].
- 21 ELGEE, F — *Hudlestonia sinon* Bayle, from the Blea Wyke Beds, Yorkshire. *Naturalist*, p. 435.
- 22 ELSDEN, J. V.—[See A. Greenwell].

- 23 FARRAR, R.—Report of the Local Government Board on the General Sanitary Circumstances and Administration of the Emley, Farnley Tyas. . . . Urban District in the West Riding of Yorkshire. . . . *Local Government Board Report*, No. 297, pp. 25. Fol. London.
- 24 ——— Report . . . of the Whitby Rural District more particularly as regards those portions of the district which are resorted to by summer visitors. *Local Government Board Report*, No. 320, pp. 9. Fol. London.
- 25 FLETCHER, J. S.—The Enchanting North [brief references to Yorkshire geology]. London. Pp. xii.+254.
- 26 ——— A Book about Yorkshire. London. Pp. 370.
- 27 FOWLER, J. C.—[See Edmund Bogg].
- 28 FOX-STRANGWAYS, C.—The Geology of the Country North and East of Harrogate. Explanation of Sheet 62 (93 N.W., Old Series). Ed. 2. Pp. v, 100. *Memoirs of the Geological Survey*. 8vo. London.
- 29 GIBSON, W.—The Eastern Extension of the Nottinghamshire and Yorkshire Coalfields. *Summary of Progress Geol. Survey* for 1907, pp. 137-140; Abstract in *Coll. Guard.*, vol. xcvi., p. 619.
- 30 ——— The Geology of Coal and Coal-Mining. [Yorkshire, Derbyshire, and Nottinghamshire Coalfield, pp. 195-203; Ingleton Coalfield, pp. 214-216]. Pp. viii., 341. 8vo. London.
- 31 GOODCHILD, W.—Precious Stones. With a Chapter on Artificial Stones by R. DYKES. [Whitby Jet, p. 289]. Pp. x., 309. 8vo. London.
- 32 GREENWELL, A., and J. V. ELSDEN.—Stone: Quarrying and Preparation for Sale. [Yorkshire, pp. 131, 132, 135, 136, 137, 375]. *Quarry*, vol. xiii., pp. 11-14, 51-54, 91-97, 131-139, 171-176, 211-217, 291-296, 331-333, 372-377, 411-415, 451-458.
- 33 GREGORY, E. E.—The later yellow Boulder Clay of Airedale. *Bradford Sci. Journ.*, vol. ii., No. 18, pp. 187-189.
- 34 GREGORY, J. W.—Geography. Structural, Physical, and Comparative. [Yorkshire, pp. 22, 103, 111, 112, 114, 117, 120, 123, 124, 126, 154]. Pp. viii., 305. 8vo London.
- 35 GUNNILL, J.—Paper read by Mr. J. Gunnill before the

- Goole Scientific and Field Naturalist (sic) Society [on 'Peat'; no title, date or pagination given]. Pp. 8.
- 36 HARKER, A.—Petrology for Students. An Introduction to the Study of Rocks under the Microscope. [Yorkshire rocks noted]. Ed. 4. Pp. vi., 336. 8vo. *Cambridge*. Ed. 1, 1895.
- 37 HARKER, T.—Flinty Chert, Hornstone, etc. [Carboniferous Rocks of Swaledale]. *Trans. Inst. Min. Eng.*, vol. xxxv., pp. 231-235; *Trans. N. Eng. Inst. Min. Mech. Eng.*, vol. lviii., pp. 199, 200.
- 38 HARRISON, W. J.—The Geology of the Counties of England, and of South Wales. Reprinted from Kelly's Post Office Directories. Special edition of ten copies. Pp. 440. Fol. *Birmingham*.
- 39 HAWKESWORTH, E.—Clapham: its Geology and Natural History. [Geology, pp. 430-433]. *Naturalist*, pp. 429-434.
- 40 HIND, W.—Life-zones in the British Carboniferous Rocks. Report of the Committee. . . [Threshfield, near Grassington]. *Rep. Brit. Assoc.* for 1907, pp. 316, 317.
- 41 ——— On the Lamellibranch and Gasteropod Fauna found in the Millstone Grit of Scotland. [*Pterinopecten papyraceus* from Hazel Hill, near Pately Bridge, pp. 339, 340]. *Trans. Roy. Soc., Edinburgh*, vol. xlv., pt. 2, pp. 331-359.
- 42 ——— [See C. A. Matley].
- 43 HOME, G.—Yorkshire Vales and Wolds painted and described by Gordon Home. [Few geological notes]. Pp. viii., 188. 8vo. *London*.
- 44 HOWARTH, J. H.—The Ice-borne Boulders of Yorkshire. *Naturalist*, pp. 97-99, 143-146, 175-180, 219-224, 245-252, 424.
- 45 JOHNS, COSMO.—[See C. A. Matley].
- 46 JOHNSTONE, M. A.—Equisetales, Horse-tails, and their Allies. *Bradford Sci. Journ.*, vol. ii., pp. 129-135.
- 47 JUDD, J. W.—Henry Clifton Sorby, and the Birth of Microscopical Petrology. [Obituary]. *Geol. Mag.*, dec. v., vol. v., pp. 193-204; *Journ. Roy. Mic. Soc.*, pp. 431-435; *Mineral Mag.*, vol. xv., No. 69, pp. 180-184.

- 48 KELLEY'S Directory of the West Riding of Yorkshire.  
Ed. 12.
- 49 KENDALL, P. F.—Erratic Blocks of the British Isles.  
Report of the Committee. . . . [Doncaster, Leeds,  
Hornsea, Pateley Bridge, Wetwang, South Cave]. *Rep.*  
*Brit. Assoc.* for 1907, pp. 329-331.
- 50 ——— Borough of Beverley. Report upon a Suitable Site  
for a New Waterworks. *Beverley Corporation Minutes*,  
pp. 407-415; Reprinted. Pp. 9.
- 51 ——— Reptilian Footprints in the Lower Oolites at Saltwick.  
*Naturalist*, p. 384.
- 52 KITCHIN, F. L.—The Invertebrate Fauna and Palæontolo-  
gical Relations of the Uitenhage Series. [Compares  
South African forms with specimens from Speeton, etc.].  
*Ann. South African Museum*, vol. vii., pt. 2, pp. 21-250.
- 53 ——— Palæontological Work. [List of Speeton Clay Fossils  
presented to the Museum]. *Summary of Progress Geol.*  
*Survey* for 1907, pp. 58-61.
- 54 L[ANGE], E. F.—Henry Clifton Sorby. [Obituary]. *Mem.*  
*Proc. Manchester Lit. Phil. Soc.*, vol. lii., pt. 3, pp. xlix.-  
liv.
- 55 LEWIS, F. J.—The Peat Moss Deposits in the Cross Fell,  
Caithness, and Isle of Man Districts. Report of the  
Committee. *Rep. Brit. Assoc.*, for 1907, pp. 410, 411.
- 56 LOMAS, J.—The Romance of a River. *The Nature Book*,  
vol. i., pp. 89-95, 159-167.
- 57 ——— Life History of a Mountain [Brimham Rocks, p.  
248; Lavingham, p. 334; Goredale Scar, p. 335].  
*Ibid.*, vol. ii., pp. 242-248, 334-338.
- 58 ——— Valleys and how they are formed. *Ibid.*, vol. iii.,  
pp. 405-412.
- 59 ——— Lakes and their Formation. *Ibid.*, vol. iv., pp. 597-602.
- 60 Low, S.—Report of the Local Government Board upon the  
Sanitary Circumstances and Administration of the Heck-  
mondwike Urban District. *Local Government Board*  
*Report*, No. 311, pp. 32 Fol. London.
- 61 ——— Report . . . of the three sanitary districts com-  
prised within the Knaresborough Registration District.  
*Local Government Board Report*, No. 321, pp. 32. Fol.  
London.

- 62 [McFARLANE, A.]—Malham in 1847. [Reprint of a Guide to Malham, written by A. McFarlane in 1847]. *Yorks. Notes and Queries*, vol. v., No. 7, pp. 155-162.
- 63 MACMICHAEL, J. H.—Kirkdale Cave. *Ibid.*, No. 8, pp. 185-191.
- 64 MARGERISON, SAMUEL.—The Vegetation of Some Disused Quarries: Topography and Geology. *Bradford Sci. Journ.*, No. 15, Jan., pp. 75-84; The Older Roadsides of the Quarries, loc. cit., No. 18, Oct., pp. 161-168.
- 65 MATLEY, C. A.—The Carboniferous Rocks at Loughshinny. (County Dublin). With an Account of the Faunal Succession and Correlation By ARTHUR VAUGHAN. [Reference to Yorkshire in the discussion by Dr. WHEELTON HIND and Mr. COSMO JOHNS]. *Quart. Journ. Geol. Soc.*, vol. lxiv., pp. 413-472, Discussion, pp. 472-474.
- 66 MIVART, F. ST. GEORGE.—Report . . . of the Bedale Rural District and on a prevalence of Diphtheria in the township of Bedale. *Local Government Board Report*, No. 302, Pp. 15. Fol. *London*.
- 67 SCOTT, D. H.—Studies in Fossil Botany. Ed. 2. Vol. i., Pteridophyta. *London*. Pp. 1-353. [Vol. ii., pp. 355-676, in 1909].
- 68 SHEPPARD, G.—Shells from Holderness Gravels. [Kelsey Hill]. *Naturalist*, p. 158.
- 69 SHEPPARD, T.—An Excursion to Topcliffe, Yorks. [Brief geological notes]. *Ibid.*, pp. 279-285.
- 70 ——— Footprints in a Yorkshire Sandstone. [Saltwick]. *Ibid.*, pp. 300, 301.
- 71 ——— Hornsea; Its Mere and Coastline. [Brief geological notes]. *Ibid.*, pp. 302-310.
- 72 ——— Belemnite in Black Flint in East Yorkshire. [Atwick]. *Ibid.*, p. 320.
- 73 ——— In Memoriam. W. Jerome Harrison, F.G.S., 1845-1908. [Obituary Notice with list of papers]. *Ibid.*, pp. 345-349.
- 74 ——— Coast Erosion at Dimlington. *Ibid.*, p. 384.
- 75 ——— Bones of Reindeer at Hessle. *Ibid.*, p. 424.
- 76 ——— Fish and other Remains from the Chalk of Lincolnshire and Yorkshire. [New records]. *Ibid.*, pp. 187-189. *Hull Museum Publications*, No. 52.

- 77 SHEPPARD, T.—An Unpublished Manuscript Map of the River Hull, dated 1668 ; Recent Additions, etc. *Hull Museum Publications*, No. 5, (Second Edition), pp. 20.
- 78 ——— Foreign Flints in the East Coast Drifts. *Geol. Mag.*, dec. v., vol. v., pp. 575, 576.
- 79 ——— Geological Specimens [from East Yorks]. *Quart. Record of Additions*, No. xxvi. *Hull Museum Publication*, No. 55, p. 5.
- 80 ——— On the Fringe of the Cleveland Mills. *Naturalist*, Nov., pp. 403-411.
- 81 ——— Hull Museums, Annual Report for 1907 [includes geological notes]. *Hull Museum Publications*, No. 50. Pp. 28.
- 82 ——— The North Sea [notice of Mr. Wheeler's Book]. *Naturalist*, Dec., pp. 459-461.
- 83 ——— Natural History as a Hobby. *Hull and East Yorkshire Teacher*, July-Oct., pp. 7. [See 1905].
- 84 ——— and J. W. STATHER. Note on a New Section in the Glacial Gravels of Holderness. [Kelsey Hill]. *Rep. Brit. Assoc. for 1907*, pp. 515, 516.
- 85 SHERBORN, C. D.—An Index to 'The Zones of the White Chalk of the English Coast.' *Proc. Geol. Assoc.*, vol. xx., pp. 340-352. [See A. W. Rowe, 1904].
- 86 SMITH, S.—The Cleveland Dyke. [Analyses]. *Proc. Darlington and Teesdale Nat. Field Club*, vol. i., pp. 89-92.
- 87 SORBY, H. C.—On the Application of Quantitative Methods to the Study of the Structure and History of Rocks. *Quart. Journ. Geol. Soc.*, vol. lxiv., pp. 171-233.
- 88 SPENCER, L. J.—[See Brauns, Richard].
- 89 SPIELMANN, P. E.—On the Origin of Jet [Analyses]. *Chem. News*, vol. xcvi., pp. 181-183.
- 90 STATHER, J. W.—Investigation of the Fossiliferous Drift Deposits at Kirmington, Lincolnshire, and at various localities in the East Riding of Yorkshire. Report of the Committee. [Bielsbeck]. *Rep. Brit. Assoc. for 1907*, pp. 325-328.
- 91 ——— The Fossiliferous Deposit at Bielsbeck, East Yorks. *Naturalist*, 1908, pp. 42-45.
- 92 ——— [See T. Sheppard].

- 93 STOPES, M. C., and D. M. S. WATSON.—On the Present Distribution and Origin of the Calcareous Concretions in Coal Seams, known as 'Coal Balls.' [Halifax Hard Bed]. *Phil. Trans. Roy. Soc.*, ser. B., vol. cc., pp. 167-218; *Geol. Mag.*, dec. v., vol. vi., pp. 37, 38.
- 94 SYMONS, B.—Genesis of Metallic Ores and of the Rocks which enclose them. [Cleveland ironstone noted, p. 154]. Pp. xxiii., 494. 8vo. *London*. Reviewed in *Mining Journ.*, vol. lxxxiv., p. 406.
- 95 TEALL, J. J. H.—Summary of Progress of the Geological Survey during 1907 [noticed in *Geol. Mag.*, Aug., 1909. Pp. 373-5].
- 96 TURNBULL, J.—Presidential Address, 1907. *Proc. Darlington and Teesdale Nat. Field Club*, vol. i., pp. 13-21.
- 97 ——— Coal and Coal Formation. *Ibid.*, pp. 40-48.
- 98 VAUGHAN, A.—[See C. A. Matley].
- 99 WATSON, D. M. S.—The Cone of *Bothrodendron mundum* (Will). [Millstone Grit and Lower Coal-Measures, Halifax, etc.]. *Mem. Proc. Manchester Lit. Phil. Soc.*, vol. lii., No. 3, pp. 16; *Rep. Brit. Assoc. for 1907*, pp. 690, 691.
- 100 ——— [See M. C. Stopes].
- 101 WHEELER, W. H.—The North Sea. Its physical characteristics, Tides, Currents, and Fishery. Pp. 41. Maps. 8vo. *London*. [See 1907]. See Notice in *Naturalist*, Dec., pp. 459-461.
- 102 WIELAND, G. R.—Historic Fossil Cycads. [*Williamsonia gigas*]. *American Journ. Sci.*, ser. iv., vol. xxv., pp. 93-101.
- 103 WOODS, H.—A Monograph of the Cretaceous Lamelli-branchiata of England. Vol. ii., pt. 5. [*Protocardia*, p. 197, and *Corbula angulata*, p. 212, from Speeton Clay]. Pp. 181-216; plates xxviii.-xxxiv. *Monogr. Pal. Soc.*, vol. lxii., for the year 1908.
- 104 WOODWARD, A. S.—The Fossil Fishes of the English Chalk. Pt. 4, pp. 129-152; plates xxvii.-xxxii. *Monogr. Pal. Soc.*, vol. lxii.
- 105 WROOT, H. E.—Yorkshire Naturalists at Hampole [near Doncaster]. Brief geological notes. *Naturalist*, pp. 380-384.

1909.

- 1 ANON.—Eminent Living Geologists. William Boyd Dawkins, M.A., D.Sc., F.R.S., F.S.A., F.G.S. (with a Portrait). [Gives list of papers, etc]. *Geol. Mag.*, Dec., pp. 529-534.
- 2 ——— The Bielsbeck Deposit. *Naturalist*, Dec., p. 402.
- 3 ——— Yorkshire Geologists in Lindsey. The Trent Valley Problem. [Reprinted from the *Yorkshire Observer*; includes report of F. M. Burton's paper on the Formation of the Trent]. Pp. 7.
- 4 ——— The Yorkshire Geological Society at Gainsborough. [Includes report of F. M. Burton's paper on the Geology of the District]. Reprinted from the *Retford [etc.] News*. Pp. 7.
- 5 ——— Boulder Committee [of the Yorkshire Naturalists' Union; report for 1905]. *Trans. Yorks. Nat. Union*, pt. 34, for 1908, pp. 13-14.
- 6 ——— Geological Section [of the Yorkshire Naturalists' Union; report for 1906]. *Trans. Yorks. Nat. Union*, pt. 34, for 1908, pp. 15-16.
- 7 ——— Glacial Committee [of the Yorkshire Naturalists' Union; report for 1906]. *Trans. Yorks. Nat. Union*, pt. 34, for 1908, p. 17.
- 8 ——— [Compiled by the Assistant Librarian and edited by the Assistant Secretary]. Geological Literature added to the Geological Society's Library during the year ended December 31st, 1908. Pp. 208.
- 9 ——— A Short Guide to the Museum of Practical Geology, Jermyn Street, London, S.W. *London*. Pp. 48.
- 10 ——— Seeds from Peat. *Naturalist*, May, p. 162.
- 11 ——— Classified Index of the Transactions of the Leeds Geological Association. vol. i.-xiv. 1883-1908. *Trans. Leeds Geol. Assoc.*, vol. xiv., 1905-8, pp. 59-67.
- 12 ——— Catalogue of the More Important Papers, especially those referring to Local Scientific Investigations, published by the Corresponding Societies [of the British Association] during the year ending May 31st, 1908. *Rep. Brit. Assoc.* (Dublin), 1908, pp. 557-576.
- 13 ——— Non-Glacial Striæ [with Illustrations]. *Naturalist*, Nov., p. 369.



- 14 ANON.—Reports of Excursions [of the Leeds Geological Association to Doncaster, Conisborough, Ingleton, North Ferriby and Brough, Garforth, Hampsthwaite and Ripley, Micklefield, Ossett, Leeds, Newby, Far Headingley and Horsforth, Kippax, and Horton-in-Ribblesdale]. *Trans. Leeds Geol. Assoc.*, vol. xiv., 1905-8, pp. 44-52.
- 15 ——— Interesting Find at Huddersfield [*Calamostachys binneyana* with Calamite leaves attached]. *Naturalist*, Sept., p. 305.
- 16 ——— Geology [of Barnsley, on the Yorkshire Naturalists' Union Circular, No. 190]. *Trans. Yorks. Nat. Union*, pt. 34 for 1908, p. 2.
- 17 ——— Chellow Dean and Bell Dean. [Geological notes; on Yorkshire Naturalists' Union Circular, No. 192]. *Trans. Yorks. Nat. Union*, part 34 for 1908, p. 3.
- 18 ——— Glacial and Post-Glacial Features. [Notice of memoir]. *Naturalist*, Oct., p. 338.
- 19 ——— Coast Changes in Yorkshire. [Notice of memoir]. *Naturalist*, Oct., pp. 338-9.
- 20 ——— Donations to Museum and Library [at York; includes particulars of the Walker Collection of East Yorkshire Fossils]. *Ann. Rep. Yorks. Phil. Soc.* for mcmviii., p. 29.
- 21 ALLCHIN, J. H.—Borough of Maidstone: A Guide to the Collections in the Museum . . . [with illustrations, etc., of slab of *Woodcrinus* (sic) *macrodactylus*, from Richmond, Yorkshire. *Maidstone*. Pp. 142.
- 22 ARBER, E. A. NEWELL.—Fossil Plants. [Coal-Measures; reproductions from 60 photographs; with descriptions]. *London*. Pp. 75.
- 23 ARMSTRONG, A. LESLIE.—Two Ancient Burial Cairns on Brimham Moor, Yorkshire. [Brief Geological notes]. *Naturalist*, March, pp. 89-92.
- 24 BACKHOUSE, J.—A Vanishing Yorkshire Village [Kilnsea]. *Ann. Rep. Yorks. Phil. Soc.* for mcmviii., pp. 49-59.
- 25 BELINFANTE, L. L. [edited by].—Abstracts of the Proceedings of the Geological Society of London. Session, 1908-1909. Nos. 866-881. Pp. 132.

- 26 BEVAN, D. W.—Mammoth's Tusk at Robin Hood's Bay. *Naturalist*, July, p. 270.
- 27 ——— Geology [brief report of recorder]. *Ann. Rep. Scarborough Phil. and Arch. Soc.* for 1908, pp. 29-30.
- 28 BRAUNS, REINHARD, and L. J. SPENCER.—The Mineral Kingdom. [Pts. 4-9 (pp. 73-184)].
- 29 BRODRICK, HAROLD.—Note on Further Footprint Casts found in the Inferior Oolite at Saltwick. *86th Ann. Rep. Whitby Lit. and Phil. Soc.*, pp. 6-7.
- 30 ——— Note on Footprint Casts from the Inferior Oolite near Whitby, Yorkshire. *Proc. Liverpool Geol. Soc.*, 1908-9, vol. x., pt. 5, pp. 327-335.
- 31 ——— Note on Casts of Dinosaurian Footprints in the Lower Oolite at Whitby. *Rep. Brit. Assoc.* (Dublin), 1908, p. 707-8.
- 32 BROWN, GEO. H.—The Ebbing and Flowing Well, Giggleswick. Revised [3rd] ed. *Settle*. [1909]. Pp. 32.
- 33 BUCKMAN, S. S.—Yorkshire Type Ammonites. [The figures being of *A. reticularis*, *A. ripleyi*, *A. aureus*, *A. mulgravius*, *A. exaratus*, *A. resupinatus*, *A. dennyi*, *A. polyophyllus*, *A. alternatus*, *A. subconcauus* and *A. boulbiensis*; all from the Robin Hood's Bay and Whitby district]. Pt. 1, pp. i.-xii., i.-ii.; 12 plates, and descriptions, Nos. 1-8.
- 34 BURNET, ARTHUR.—Note on the Microscopic Aspects of some Cretaceous Rocks. [Brief reference to Yorkshire Chalk]. *Trans. Leeds Geol. Assoc.*, vol. xiv., 1905-8, pp. 42-43.
- 35 BURTON, F. M.—[See under Anon].
- 36 BURTON, J. J.—[Geological Notes on Runswick]. *Naturalist*, Sept., pp. 309-311.
- 37 [CARTER, W. LOWER and COSMO JOHNS] (not signed).—Honorary Secretaries' Report, 1908. Excursions, 1908 [with details of areas visited, etc.]. *Proc. Yorks. Geol. Soc.*, vol. xvi., pt. 3, 1908, pp. 405-423.
- 38 C[OLE], G. A. J.—Regional and Stratigraphical Geology [reviewing recent memoirs]. *Nature*, Feb., 18th, pp. 470-2.
- 39 COLE, GRENVILLE A. J.—Aids in Practical Geology. 6th Edition. *London*. Pp. 431.

- 40 COOK, J. Travis.—[See J. Travis-Cook].
- 41 CULPIN, H.—'Marine Bands in the Yorkshire Coalfield.'  
[Abstract]. *Trans. Leeds Geol. Assoc.*, vol. xiv., 1905-8,  
pp. 35-37. [See also *Coll. Guard.*, vol. xcvi., pp. 474-5.
- 42 ——— Stainton Woodhouse [boulders at ; in Report Erratic  
Blocks Committee]. *Rep. Brit. Assoc.* (Dublin) 1908  
p. 244.
- 43 ——— Geology [of Askern ; on Yorkshire Naturalists' Union  
Circular, No. 196]. *Trans. Yorks. Nat. Union*, pt. 34,  
for 1908, p. 2.
- 44 ——— Geology [of Thorne ; on Yorkshire Naturalists'  
Union Circular, No. 203]. *Trans. Yorks. Nat. Union*,  
pt. 34, for 1908, pp. 2-3.
- 45 ——— Geology [of Hampole ; on Yorkshire Naturalists'  
Union Circular, No. 210]. *Trans. Yorks. Nat. Union*,  
pt. 34, for 1908, p. 2.
- 46 ——— Marine and other Fossils in the Yorkshire Coal-  
Measures above the Barnsley Seam [with Sections and  
extensive classified lists of fossils]. *Proc. Yorks. Geol.*  
*Soc.*, vol. xvi., pt. 3, 1908, pp. 321-334.
- 47 ——— Permian Fossils in the Doncaster District.  
*Naturalist*, Aug., pp. 279-280.
- 48 CUTTRISS, S. W.—Gaping Ghyll Again. *Yorks. Ramblers'*  
*Club Journal*, vol. ii., pt. 8 ; 1907-8, pp. 306-311.
- 49 DAVIES, A. MORLEY.—A Geography of the British Isles  
[with Geological notes]. *London*. Pp. 358.
- 50 DEELEY, R. M.—Scandinavian Ice-sheets and British  
Glacial Drifts. [Letter replying to Professor Bonney].  
*Geol. Mag.*, May, pp. 238-9.
- 51 DOUGLAS, JAMES ARCHIBALD.—The Carboniferous Lime-  
stone of County Clare (Ireland). [Compares with the  
successions in Yorkshire, etc.]. *Quart. Journ. Geol. Soc.*,  
vol. 65, pt. 4, Nov., pp. 538-586.
- 52 DRAKE, H. C.—Remains of a Chimæroid Fish from the  
Coral Rag of North Grimston. *Naturalist*, May, p. 196.
- 53 ——— Palæontology in East Yorkshire, etc., in 1908.  
*Trans. Hull Sci. and Field Nat. Club*, vol. iv., pt. 2,  
pp. 85-86.
- 54 ——— [See T. Sheppard].
- 55 DUNSTON, G.—The Rivers of Axholme with a History of

- the Navigable Rivers and Canals of the District [giving details of the borehole at South Carr]. Pp. xiii. + 155.
- 56 DURNFORD, H. ST. JOHN.—Geological Notes on a Deep Boring at Selby [giving details of strata to depth of 2,371 feet]. *Proc. Yorks. Geol. Soc.*, vol. xvi., pt. 3, 1908, pp. 337-346.
- 57 DWERRYHOUSE, A. R.—‘Caves and their Mode of Origin’ [brief abstract]. *Trans. Leeds Geol. Assoc.*, pt. xiv., 1905-8, pp. 7-8.
- 58 ——— [Secretary].—Erratic Blocks of the British Isles. Report of the Committee [including records by P. F. Kendall, T. Sheppard, J. W. Stather, H. Culpin, J. W. Jackson, etc.]. *Rep. Brit. Assoc.* (Dublin), 1908, pp. 242-245.
- 59 ——— Erratic Blocks of the British Isles. Report of the Committee [includes reports relating to the Northern Counties, from A. C. Dalton, E. Adrian Woodruffe-Peacock, Ernest Jones, W. J. Wingate, A. Bell]. *Brit. Assoc.* (Reprint), Pp. 8.
- 60 ——— Notes on a Junction of Coal Measures and Millstone Grit at Hawkesworth Quarry, Horsforth. *Proc. Yorks. Geol. Soc.*, vol. xvi., pt. 3, 1908, pp. 391-392.
- 61 ELGEE, FRANK.—County Borough of Middlesbrough. Dorman Memorial Museum Official Guide [containing particulars of local fossils, etc.]. Pp. 20.
- 62 ——— The Glaciation of North Cleveland [with numerous maps, etc.]. *Proc. Yorks. Geol. Soc.*, vol. xvi., pt. 3, 1908, pp. 372-382.
- 63 ——— The Fauna of Cleveland, Past and Present [Geological Notes]. *Proc. Cleveland Nat. Field Club*, vol. ii., pt. 3, 1907-8, pp. 143-171.
- 64 ——— [See W. Y. Veitch].
- 65 ELSDEN, J. V.—[See A. Greenwell].
- 66 FEARNSIDES, WILLIAM GEORGE.—[See John Edward Marr].
- 67 FOWLER, J. C.—The Ancient Saxon Parish of Whorlton, in Cleveland, [etc., with geological notes on pp. 35-36]. *Middlesbrough*. 2nd ed. Pp. 1-36. [The first edition issued anonymously in 1904, contained no geological notes].

- 68 FOWLER, J. C.—A large Glacial Boulder at Whorlton. [Shap Granite, 23 feet in circumference]. *Proc. Cleveland Nat. Field Club*, 1907-8, vol. ii., pt. 3, pp. 174-175.
- 69 ——— An interesting Geological Discovery [at Whorlton ; stool of oak (?) in position below 6 feet of glacial (?) drift clay]. *Proc. Cleveland Nat. Field Club*, 1907-8, vol. ii., pt. 3, pp. 176-177.
- 70 GILLIGAN, ALBERT.—Some Effects of the Storm of June 3rd, 1908, on Barden Fell [with numerous photographs]. *Proc. Yorks. Geol. Soc.*, vol. xvi., pt. 3, 1908, pp. 383-390.
- 71 GREENWELL, ALLAN, and J. V. ELSDEN.—Stone: Quarrying, etc. Also the *Quarry*, June, pp. 199-203 to July, pp. 235-238. Nov., pp. 379-384.
- 72 GREGORY, E. E.—Correspondence [replying to H. Brantwood Maufe's criticism in previous issue]. *Bradford Sci. Journ.*, April, pp. 254-5.
- 73 ——— [See H. Brantwood Maufe].
- 74 GREW, E. S.—The Romance of Modern Geology. [Refers to Yorkshire Pot-holes, etc.]. *London*. Pp. 308.
- 75 HARGREAVES, J. A.—Land and Freshwater Mollusca in the Scarborough District. [Brief Geological notes]. *Journ. of Conch.*, July, pp. 299-308.
- 76 HARKER, ALFRED.—The Natural History of Igneous Rocks. *London*. Pp. 384.
- 77 HARMER, F. W.—The Pleistocene Period in the Eastern Counties of England. [Brief reference to Yorkshire]. *Geology in the Field*, pt. 1, pp. 103-123.
- 78 HASTINGS, CUTHBERT.—Gaping Ghyll [with photo]. *Bradford Sci. Journ.*, No. 22, Oct., pp. 289-294.
- 79 HATCH, F. H.—Text-book of Petrology, containing a summary of the modern theory of Petrogenesis, a description of the rock-forming minerals, and a synopsis of the chief types of the igneous rocks and their distribution as illustrated by the British Isles. Pp. 404.
- 80 HAWKESWORTH, E.—Geology [of Horton-in-Ribblesdale ; on Yorkshire Naturalists' Union Circular, No. 205]. *Trans. York. Nat. Union*, pt. 34, for 1908, p. 3.

- 81 HAWKESWORTH, E.—Geology [of Harrogate, on Yorkshire Naturalists' Union Circular, No. 195].? *Trans. Yorks. Nat. Union*, pt. 34, for 1908, p. 2.
- 82 ——— Geology [of Osmotherley; on Yorkshire Naturalists' Union Circular, No. 211]. *Trans. Yorks. Nat. Union*, pt. 34 for 1908, p. 3.
- 83 ——— Details of a Boring near Barwick-in-Elmet. *Trans. Leeds Geol. Assoc.*, vol. xiv., 1905-8, pp. 40-42.
- 84 ——— Geological Section [of the Yorkshire Naturalists' Union; report for 1907]. *Trans. Yorks. Nat. Union*, pt. 34 for 1908, p. 16.
- 85 ——— [See W. Robinson].
- 86 ——— [See A. J. Stather].
- 87 HEY, W. C.—Note on Transported Lias near Filey. *Naturalist*, May, pp. 204-5.
- 88 HIND, W.—The Homotaxial Equivalents of the Culm of Western Germany, [refers to Yorkshire, etc.]. *Geol. Mag.*, Oct., pp. 468-472.
- 89 HIND, WHEELTON.—The Present State of our Knowledge of Carboniferous Geology [being the Presidential Address to the Yorkshire Naturalists' Union]. *Naturalist*, pp. 149-156, 163-170, 228-231, 245-251.
- 90 ——— Description of two New Species of Lamellibranchs from Marine Bands of the Yorkshire Coalfield [describing and figuring *Aviculopecten culpini*, sp. nov., and *Scaldia carbonaria*, sp. nov.]. *Proc. Yorks. Geol. Soc.*, vol. xvi., pt. 3, 1908, pp. 335-6.
- 91 HOLGATE, BENJAMIN.—A Description of Six Sections in the Lower Coal-Measures of Leeds [in strata between the 'Better Bed' Coal to 70 feet above the 'Beeston Bed' Coal]. *Trans. Leeds Geol. Assoc.*, vol. xiv., 1905-8, pp. 53-58 (plates).
- 92 HOWARTH, J. H. and J. W. STATHER [not signed].—Glacial Committee [of the Yorkshire Naturalists' Union, report for 1908]. *Trans. Yorks. Nat. Union*, part 34, for 1908, pp. 32-33.
- 93 HUGHES, T. MCKENNY.—Ingleborough. Part vi., The Carboniferous Rocks [with plans, sections, etc., and lists of organic remains]. *Proc. Yorks. Geol. Soc.*, vol. xvi., pt. 3, 1908, pp. 253-320.

- 94 IRVING, JOHN.—The Queen of Watering Places [Scarborough: with geological notes]. *The West Riding County Council Vacation Courses*, II. August, pp. 9-14.
- 95 JACKSON, J. WILFRID.—Holocene Mollusca near Great Mitton, West Yorkshire. *Journ. of Conchology*, vol. xii., No. 10, April 1st, pp. 263-265.
- 96 ——— On the Type-Specimen of *Pseudomelania vittata* (Phillips) [from the Cornbrash at Scarborough; now at Manchester]. *Geol. Mag.*, Dec., pp. 542-3.
- 97 JOHNS, COSMO.—Some Undescribed Faults in the Settle-Malham Area. *Proc. Yorks. Geol. Soc.*, vol. xvi., pt. 3, 1908, pp. 393-402.
- 98 ——— Geological Section [of the Yorkshire Naturalists' Union; report for 1905]. *Trans. Yorks. Nat. Union*, pt. 34, for 1908, pp. 11-12.
- 99 ——— 'The Carboniferous Sea—A Chapter in the Ancient Geography of Britain.' [Abstract]. *Trans. Leeds Geol. Assoc.*, vol. xiv., 1905-8, pp. 19-20.
- 100 ——— Geology [of Askrigg; on Yorkshire Naturalists' Union Circular, No. 187]. *Trans. Yorks. Nat. Union*, pt. 34, for 1908, p. 2.
- 101 ——— The Yorkshire Fossil Flora and Fauna Committee. [Faunal report for 1906]. *Trans. Yorks. Nat. Union*, pt. 34, for 1908, p. 19.
- 102 ——— Report on the Work of the Carboniferous Flora and Fauna Committee [for 1908]. *Trans. Yorks. Nat. Union*, pt. 34, for 1908, p. 34.
- 103 ——— and W. ROBINSON.—Geology [of Ingleton; on Yorkshire Naturalists' Union Circular, No. 193]. *Trans. Yorks. Nat. Union*, pt. 34, for 1908, pp. 2-3.
- 104 ——— [See W. Lower Carter].
- 105 JOHNSTONE, MARY A.—A Fossil Stump [from the Coal-Measures, now in Manningham Park, Bradford]. *Bradford Sci. Journ.*, No. 22, Oct., pp. 298-301.
- 106 KELLY, —.—Directory of the North and East Ridings of Yorkshire. Ninth Edition. [Geology briefly referred to].
- 107 [P. F.] KENDALL.—Robin Hood's Bay [Boulders at; in Report Erratic Blocks Committee]. *Rep. Brit. Assoc.* (Dublin), 1908, pp. 242-243.

- 108 KENDALL, P. F.—[Geology of Robin Hood's Bay; on Yorkshire Naturalists' Union Circular, No. 201]. *Trans. Yorks. Nat. Union*, pt. 34, for 1908, pp. 2-3.
- 109 ——— 'The Geological History of the North Sea Basin' [abstract]. *Trans. Leeds Geol. Assoc.*, vol. xiv., 1905-8, pp. 30-32.
- 110 ——— In Memoriam, Henry Clifton Sorby, 1826-1908 [with photos of microscope slides, etc.]. *Proc. Yorks. Geol. Soc.*, vol. xvi., pt. 3, 1908, pp. 247-8.
- 111 ——— In Memoriam, Joseph Lomas. *Proc. Yorks. Geol. Soc.*, vol. xvi., pt. 3, 1908, pp. 251-252.
- 112 KNOWLES, LEES.—Presidential Address [to the Manchester Geological and Mining Society]. Our Steam-Coal and its Uses. *Trans. Manchester Geol. and Min. Soc.*, vol. xxxi., pts. 2 and 3, pp. 36-47.
- 113 LAMPLUGH, G. W.—Physiographical Notes, No. 1. [Refers to glacial and post-glacial features in Yorkshire, etc.]. *Geog. Journ.*, July, pp. 55-59.
- 114 LANE, GEORGE J.—Jurassic Plants from the Cleveland Hills [with illustration of *Zamites* sp. (cf. *buchianus*)]. *Proc. Cleveland Nat. Field Club*, 1907-8, vol. ii., pt. 3, pp. 172-173.
- 115 ——— and T. W. SAUNDERS.—Fossil Plants from the Marske and Upleatham Quarries, Yorkshire. *Naturalist*, March, pp. 681-82.
- 116 LIGNIER, O.—Sur un Moule litigieux de *Williamsonia gigas* (L. et H.). *Carr. Bull. Soc., Linn. Norm.*, ser. 6, i., pp. 3-13.
- 117 MARGERISON, SAMUEL.—The Vegetation of some Disused Quarries. Succession (continued). *Bradford Scientific Journal*, No. 19, Jan., pp. 206-214.
- 118 ——— The Vegetation of some Disused Quarries: the conquest of new ground by plants. [Reprinted from the *Bradford Scientific Journ.*] Pp. 52.
- 119 MARR, JOHN EDWARD, and WILLIAM GEORGE FEARN SIDES—The Howgill Fells and their Topography [with numerous maps, sections, etc.]. *Quart. Journ. Geol. Soc.*, vol. lxx., pt. 4, Nov., pp. 587-610. [Abstract in *Geol. Mag.*, Aug., p. 380.]



- 120 MARTEL, E. A.—Speleology : A Modern Sporting Science [brief references to caves, etc., in the Northern Counties]. *Yorks. Ramblers' Club Journ.*, vol. ii., No. 8, 1907-8, pp. 278-290.
- 121 MATTHEWS, E. R.—The Yorkshire Coast Erosion Committee [report for 1908]. *Trans. Yorks. Nat. Union*, for 1908, p. 33.
- 122 MAUFE, H. BRANTWOOD.—Correspondence [respecting the Yellow Clay of Airedale]. *Bradford Sci. Journ.*, No. 21, July, pp. 287-288.
- 123 ——— Correspondence [criticising E. E. Gregory's paper on 'The Later Yellow Boulder Clay of Airedale']. *Bradford Sci. Journ.*, No. 19, Jan., pp. 221-222.
- 124 MILTHERS, V.—Scandinavian Indicator-Boulders in the Quaternary Deposits. Extension and Distribution. [refers to Scandinavian, etc., erratics in England]. *Danmarks Geologiske Undersøgelse II. Række*, No. 23, pp. 1-153 (maps).
- 125 MITCHELL, T. CARTER.—Geology [of Brafferton; on Yorkshire Naturalists' Union Circular, No. 208]. *Trans. Yorks. Nat. Union*, pt. 34, for 1908, p. 3.
- 126 MORTIMER, J. R.—The Genesis of the Yorkshire Chalk [abstract]. *Proc. Geol. Assoc.*, vol. xxi., pt. 2, pp. 95-96.
- 127 PALMER, W. E.—A Wet Day in Helln Pot. *Yorks. Ramblers' Club Journ.*, vol. iii., No. 9, pp. 45-8.
- 128 PICKERING, W. H.—Reports of . . . Inspector of Mines for the Yorkshire and Lincolnshire District (No. 5), to His Majesty's Secretary of State . . . for the year 1908. Pp. 54.
- 129 POWELL, F. W.—A Short Account of St. Gregory's Minster, Kirkdale [with description of Kirkdale Cave and its contents]. *Leeds*. Pp. 44.
- 130 PRICE, A. C.—Leeds and its Neighbourhood : an illustration of English History [including geological notes]. *Oxford*, p. xxiii. + 322.
- 131 RASTALL, ROBERT HERON.—On the Boulders of the Cambridge Drift : their Distribution and Origin. *Quart. Journ. Geol. Soc.*, vol. lxxv., pt. 3, Aug., pp. 246-264. See also *Naturalist*, July, p. 243.
- 132 REID, ELEANOR M.—On a Method of Disintegrating Peat

- and other Deposits containing Fossil Seeds. [Refers to samples from Hornsea, Bielsbeck, etc.]. *Journ. Linn. Soc.*, vol. xxviii., Feb., pp. 454-457.
- 133 REYNOLDS, SIDNEY H.—A Monograph of the British Pleistocene Mammalia, vol. ii., pt. 3. The Canidæ, pp. 1-28, plates i.-vi. [Refers to specimens from Bielsbeck, etc.]. *Monogr. Pal. Soc.*, vol. lxiii.
- 134 RICHARDSON, J. ALARIC.—Report on the Field Meetings of the Natural History Society for 1907. [Brief Geological notes]. *Trans. Nat. Hist. Soc. of Northumberland, Durham and Newcastle-upon-Tyne*, n. s., vol. iii., pt. 2, pp. 467-481.
- 135 ROBERTS, E. E.—Mere Gill Hole [between Simon Fell and Ingleborough]. *Yorks. Ramblers' Club Journ.*, vol. ii., pt. 8, 1907-8, pp. 312-314.
- 136 ROBINSON, W. and E. HAWKESWORTH.—Geology [of Clapham; on Yorkshire Naturalists' Union Circular, No. 212]. *Trans. Yorks. Nat. Union*, pt. 34, for 1908, pp. 2-3.
- 137 ROBINSON, W.—[See Cosmo Johns].
- 138 ROMANES, J.—[See R. H. Rastall].
- 139 ROWLEY, WALTER.—Notes on the Development of the Yorkshire Coalfield in the Neighbourhood of Doncaster. *Proc. Yorks. Geol. Soc.*, vol. xvi., pt. 3, 1908, pp. 403-404.
- 140 RULE, A.—Gaping Ghyll in Flood. *Yorks. Ramblers' Club Journ.*, vol. iii., No. 9, pp. 67-77.
- 141 SAUNDERS, T. W.—[See George J. Lane].
- 142 SCOTT, D. H.—Studies in Fossil Botany. Ed. 2, pp. vxxi. + 683. [See 1900].
- 143 SHEPPARD, T.—In Memoriam, Wilfred H. Hudleston, F.R.S., F.G.S., etc. (1828-1909). [Referring to his work in North-East Yorkshire]. *Naturalist*, March, pp. 123-124.
- 144 ——— Yorkshire Naturalists' at Bowland. [Geological notes]. *Naturalist*, August, pp. 299-302.
- 145 ——— Yorkshire Naturalists at Cawthorne. [Brief Geological notes]. *Naturalist*, Nov., pp. 393-397.
- 146 ——— Yorkshire Naturalists at Sedbergh. [Geological Notes]. *Naturalist*, Oct., pp. 345-348.

- 147 SHEPPARD, T.—Natural History of Runswick. [Geological notes]. *Naturalist*, Sept., pp. 309-313.
- 148 ——— Yorkshire Naturalists at Market Weighton. [Brief Geological notes]. *Naturalist*, June, pp. 232-234.
- 149 ——— Plants from the Peat [*Iris pseudacorus* and *Lathyrus palustris*]. *Naturalist*, December, p. 443.
- 150 ——— Shap Granite at Hull. *Naturalist*, December, p. 443.
- 151 ——— Withernsea [etc., Boulder Records; in Report Erratic Blocks Committee]. *Rep. Brit. Assoc.* (Dublin), 1908, p. 243.
- 152 ——— Bibliography: Papers and Records published in respect to the Geology and Palæontology of the North of England, 1902-1908. [1902, 183 entries; 1903, 203 entries; 1904, 245 entries; 1905, 218 entries; 1906, 275 entries; 1907, 278 entries; 1908, 208 entries; total, 1609 items]. *Trans. Yorks. Nat. Union*, pt. 34, for 1908, pp. 1-119.
- 153 ——— Hull Museums: Annual Report for 1908 [including Geological notes on pp. 16-19]. *Hull*. January. Pp. 32.
- 154 ——— The Ordinary Field Meetings [of the Yorkshire Naturalists' Union, for 1906]. *Trans. Yorks. Nat. Union*, pt. 34, for 1908, pp. 1-4.
- 155 ——— Six Field Meetings [of the Yorkshire Naturalists' Union, for 1907]. *Trans. Yorks. Nat. Union*, pt. 34, for 1908, pp. 1-4.
- 156 ——— Six Field Meetings [of the Yorkshire Naturalists' Union, for 1908]. *Trans. Yorks. Nat. Union*, pt. 34, for 1908, pp. 1-4.
- 157 ——— The Ordinary Field Meetings [of the Yorkshire Naturalists' Union, in 1905; geological notes]. *Trans. Yorks. Nat. Union*, No. 34, for 1908, pp. 1-3.
- 158 ——— Skull of Bison [found at Kelsey Hill]. *Hull Museum Publication*, No. 60, March, pp. 10-11.
- 159 ——— Pink Flints in the Chalk. *Geol. Mag.*, Feb., p. 88.
- 160 ——— Royal Geographical Society, Research Department. Changes on the East Coast Region of England during the Historical Period. I. Coast Changes in East Yorkshire. *Preliminary Summary Report*, 1909, pp. 1-14. Reprinted in *Geog. Journ.*, vol. xxxiv., No. 5, Nov., pp. 500-513.

- 161 SHEPPARD, T.—Vertebra of Codfish in the Holderness Gravels. *Naturalist*, June, p. 225.
- 162 ——— On a Specimen of *Eryon antiquus* Broderip, from the Yorkshire Lias. *Naturalist*, Jan., pp. 8-10; re-printed in *Trans. Hull Sci. and Field Nat. Club*, vol. iv., pt. 2, pp. 81-83, and in *Hull Museum Publication*, No. 58.
- 163 ——— The Evolution of an English City. [Hull: Brief Geological notes]. *Hull Lit. Club Mag.*, vol. iii., pt. 5, pp. 273-277.
- 164 ——— Filey: its Brig and Cliffs. *The West Riding County Council Vacation Courses*, ii., August, pp. 28-35.
- 165 ——— Guide to the Municipal Museum, Royal Institution, Albion Street, Hull. (Third Edition). [Geological Notes]. *Hull*. Pp. 48.
- 166 ——— and H. C. DRAKE.—Catalogue of Specimens in the 'Lether' Collection, and of the Cornbrash Fossils in the Hull Museum. *Trans. Hull Sci. and Field Nat. Club*, vol. iv., pt. 2, pp. 71-80, and reprinted in *Hull Museum Publication*, No. 58.
- 167 SIMPSON, [W.].—Geology [of Halifax; on Yorkshire Naturalists' Union Circular, No. 207]. *Trans. Yorks. Nat. Union*, pt. 34, for 1908, p. 2.
- 168 SMITH, B.—[See G. W. Lamplugh].
- 169 SMITH, B. M.—Geology [of Ripon; on Yorkshire Naturalists' Union Circular, No. 186, with contribution by the late J. S. Tute]. *Trans. Yorks. Nat. Union*, pt. 34, for 1908, p. 2.
- 170 SMITH, FREDERICK.—The Stone Age in North Britain and Ireland. [Very brief Geological notes]. Pp. 377.
- 171 SMITH, W. G.—'The Cleveland and North-East Yorkshire.—The Influence of Soils on Vegetation' [abstract]. *Trans. Leeds Geol. Assoc.*, vol. xiv., 1905-8, pp. 37-40.
- 172 SOLLAS, WILLIAM JOHNSON.—The Anniversary Address of the President [of the Geological Society; with Obituary Notices of H. C. Sorby, Sir John Evans, W. H. Hudleston and other workers in the Northern Counties]. *Quart. Journ. Geol. Soc.*, vol. lxx., pt. 2, pp. l-cxxii.
- 173 SPENCER, L. J.—[See Reinhard Brauns].
- 174 STANTON, F. W. S.—Erosion of the Coast and its Prevention. [Refers to the Holderness Coast]. *London*. Pp. 68.

- 175 STATHER, A. J.—Geological Photographs Committee [of the Yorkshire Naturalists' Union; report for 1908]. *Trans. Yorks. Nat. Union*, pt. 34, for 1908, pp. 30-31.
- 176 ——— Geological Photographs Committee [of the Yorkshire Naturalists' Union; report for 1907]. *Trans. Yorks. Nat. Union*, pt. 34, for 1908, p. 20.
- 177 ——— and E. HAWKESWORTH.—Geological Section [of the Yorkshire Naturalists' Union, report for 1908]. *Trans. Yorks. Nat. Union*, pt. 34, for 1908, pp. 29-30.
- 178 STATHER, J. W.—Geology [of Flamborough; on Yorkshire Naturalists' Union Circular, No. 194]. *Trans. Yorks. Nat. Union*, pt. 34, for 1908, p. 2.
- 179 ——— At Aldborough [Boulders; in Report Erratic Blocks Committee]. *Rep. Brit. Assoc.* (Dublin), 1908, p. 244.
- 180 ——— (Secretary).—Investigation of the Fossiliferous Drift Deposits at Kirmington [etc., Inter Report of the Committee]. *Rep. Brit. Assoc.* (Dublin), 1908, p. 296.
- 181 ——— Geology [of Hornsea; on Yorkshire Naturalists' Union Circular, No. 209]. *Trans. Yorks. Nat. Union*, pt. 34, for 1908, pp. 2-3.
- 182 ——— Geology [of South Cave; on Yorkshire Naturalists' Union Circular, No. 202]. *Trans. Yorks. Nat. Union*, pt. 34, 1908, pp. 2-3.
- 183 ——— Geology [of Pocklington; on Yorkshire Naturalists' Circular, No. 189]. *Trans. Yorks. Nat. Union*, pt. 34, for 1908, p. 3.
- 184 ——— Glacial Committee [of the Yorkshire Naturalists' Union; Report for 1907]. *Trans. Yorks. Nat. Union*, pt. 34, 1908, pp. 17-18.
- 185 ——— (Secretary).—Investigations of the Fossiliferous Drift Deposits at Kirmington, Lincolnshire, and at various localities in the East Riding of Yorkshire. Report of the Committee [with plan and sections of the deposit at Bielsbeck, and lists of bones of *Elephas primigenius* and *Bison priscus* which were obtained]. *Brit. Assoc. Leaflet*. Pp. 5.
- 186 ——— [See J. H. Howarth].
- 187 SWEETING, R. D.—Report to the Local Government Board . . . with special reference to the continual

- prevalence of Enteric Fever [at Rotherham; Water Supply]. N. S. No. 3. Pp. 30.
- 188 TAYLOR, JOHN W.—Monograph of the Land and Fresh-water Mollusca of the British Isles. [Records *Punctum pygmius* at Bielsbeck, etc.], pt. 16, pp. 145-244, September 30th.
- 189 THOMAS, H. HAMSHAW.—On a specimen of the Cone, *Calamostachys binneyana* (Carr.). [A specimen from the Halifax Hard Bed at Huddersfield shews for the first time that this well-known cone was borne on a calamite plant]. *Proc. Cambs. Phil. Soc.*, vol. xv., pt. 3, pp. 236-8.
- 190 ——— On a cone of *Calamostachys binneyana* (Carruthers) attached to a leafy shoot [of *Calamocladus* (= *Asterophyllites*) *grandis* (Sternb.) from the Halifax Hard Bed at Huddersfield], *New Phytologist*, vol. viii., No. 7, July, pp. 249-260. [See also *Naturalist*, p. 305.]
- 191 THOMPSON, C.—The Ammonites called *A. serpentinus* [with descriptions and figures of allied forms]. *Naturalist*, June, pp. 214-219.
- 192 THOMPSON, G. R.—‘The Application of Geology to Mining’ [brief abstract]. *Trans. Leeds Geol. Assoc.*, vol. xiv., 1905-8, p. 8.
- 193 TRAQUAIR, RAMSAY H.—The Ganoid Fishes of the British Carboniferous Formations. Pt. 1, No. 4. Palæoniscidæ, pp. 107-122, plates xxiv.-xxx [describes *Acrolepis hopkinsi* from Hebden Bridge]. *Monogr. Pal. Soc.*, vol. lxiii.
- 194 TRAVIS-COOK, J.—Notes on the Origin of Kingston-upon-Hull . . . and of the Port of Hull, also on the Camin Charter, the Meaux Register (including the ‘Old River Hull Tradition,’ and ‘Glimpses of Mediæval Hull’). *Hull*. Pp. 68.
- 195 TUTE, J. S.—[See B. M. Smith].
- 196 VAUGHAN, A. (Secretary).—Faunal Succession in the Lower Carboniferous (Avonian) of the British Isles, Report of the Committee. *Brit. Assoc. Leaflet*. Pp. 5 and diagram.
- 197 VEITCH, W. Y.—Geology [of Loftus; on Yorkshire

- Naturalists' Union Circular, No. 188]. *Trans. Yorks. Nat. Union*, pt. 34 for 1908, pp. 2-3.
- 198 — and FRANK ELGEE. Geology [of Guisborough ; on Yorkshire Naturalists' Union Circular, No. 198]. *Trans. Yorks. Nat. Union*, pt. 34, for 1908, p. 2.
- 199 VERNON, ROBERT DOUGLAS.—The Geology of the Lower Coal-Measures of the Derbyshire and Nottinghamshire portion of the Yorkshire Coalfield. *Geol. Mag.*, July, pp. 289-299.
- 200 VILLEY, FRANCIS.—An Explanation of Mounds near Cullingworth [thought by some to be remains of quarries, one is, perhaps, a trial shaft for coal]. *Bradford Sci. Journ.*, No. 19, Jan., pp. 219-220.
- 201 WATSON, D. M. S.—A Preliminary Note on two new Genera of Upper Liassic Plesiosaurs [*Microcleidus*, and *Sthenarosaurus dawkinsi*, from Whitby]. *Mem. and Proc. Manchester Lit. and Phil. Soc.*, vol. liv., pt. 1, Dec., 31st, No. iv., pp. 1-28.
- 202 WATTS, ARTHUR.—History of the Browney Valley. [Lecture delivered Nov. 9th, 1904]. *Trans. Nat. Hist. Soc. of Northumberland, Durham and Newcastle-upon-Tyne*, n. s., vol. iii., pt. 2, pp. 452-461.
- 203 WATTS, W. W. (Secretary).—Photographs of Geological Interest. Sixteenth Report of the Committee [including details of photographs from Yorkshire]. *Rep. Brit. Assoc.* (Dublin), 1908, pp. 245-267.
- 204 WILMORE, A.—Notes on the Geology of Thornton, Marton, and Broughton-in-Craven, Yorkshire [with lists of fossils and numerous plates]. *Proc., Yorks. Geol. Soc.*, vol. xvi., pt. 3, 1908, pp. 347-371.
- 205 WOODHEAD, T. W.—Geology [report for ; refers to finds near Huddersfield]. *Ann. Rep. Huddersfield Nat. Hist. and Photo. Soc.*, 1908-9, p. [7].
- 206 WOODS, HENRY.—A Monograph of the Cretaceous Lamelibranchia of England. Vol. ii., pt. 6, pp. 217-260 ; plates xxxv.-xliv. [Describes and figures *Panopea gurgitus*, *Martesia constricta*, *Thracia phillipsi*, and *Pholadomya speetonensis*, from Speeton]. *Monogr. Pal. Soc.*, vol. lxiii.

- 207 WOODS, HENRY.—Palæontology, Invertebrate. 4th ed. Cambridge. Pp. xiv.+388.
- 208 WOODWARD, HENRY.—‘On a Carboniferous Trilobite from Angram, in Nidderdale’ [*Griffithides barkei*]. *Trans. Leeds Geol. Assoc.*, vol. xiv., 1905-8, pp. 10-12.
- 209 W[OODWARD], H.—Wilfrid Hudleston Hudleston, 1828-1909. [Obituary notice, with account of his work in Yorkshire, etc.]. 5 pp. of reprint.

## 1910.

- 1 ANON.—Summary of Progress of the Geological Survey of Great Britain . . . for 1909; [refers to work in Yorkshire, with an appendix on Ingleton borings by W. GIBSON], 1910. Pp. iv.+92.
- 2 ——— Yorkshire Type Ammonites [notice of; with illustration of *A. polyophyllus*]. *Naturalist*, Jan., p. 4; Feb., p. 98.
- 3 ——— A Relic of the Past [Rhinoceros tooth at Dimlington]. *Animal World*, March, p. 59.
- 4 ——— [Obituary notice of C. Fox-Strangways, containing reference to his work in Yorkshire, etc.]. *Nature*, March 24th, p. 104-5.
- 5 ——— Geography at the British Association [summary of papers read, some bearing upon south-east Yorks]. *Nature*, Oct. 27th, pp. 551-553.
- 6 ——— The Presidential Address [at the Sheffield Meeting of the British Association; a criticism of Prof. Bonney’s address, with many references to northern glacial geology]. *Naturalist*, Oct., pp. 353-357.
- 7 ——— British Association for the Advancement of Science . . . Sheffield, Sept. 1st to 7th. List of Titles of Papers read in section C (Geology) and other sections bearing on Geology [66 items]. *Geol. Mag.*, Oct., pp. 469-471.
- 8 ——— Catalogue of the More Important Papers, especially those relating to Local Scientific Investigations, published by the Corresponding Societies [of the British Association] during the year ending May 31st. 1909. *Rep. Brit. Assoc.* (Winnipeg) for 1909, pp. 349-369.
- 9 ——— European Glacial Deposits; Limits of the Ice Sheet; Yorkshire Drifts; Aspects of the Drifts; Moraines;



- British Ice Sheets ; Conclusious [notice of Frank Leverett's paper]. *Naturalist*, Dec., pp. 416-418.
- 10 ANON.—Yorkshire Type Ammonites. [Notice of Mr. Buckman's work, with reproduction of plate of *Harpoceras mulgravium*]. *The 87th Report Whitby Lit. and Phil. Soc.*, p. 11.
- 11 — [Signed 'Recorder']. Yorkshire Geologists and Editors [refers to Simpson's types of Liassic belemnites] *Geol. Mag.*, Oct., p. 479.
- 12 A[RBER], E. A. N.—Some Recent Studies of Fossil Plants [with figure of the male flower of *Williamsonia spectabilis* Nathorst, from the Lower Oolite of Whitby]. *Nature*, Oct. 13th, pp. 473-475.
- 13 ARBER, (Mrs.) E. A. NEWELL.—A note on *Cardiocarpon compressum* Will. The result of a re-examination of a Coal Measure Seed originally figured and described by Williamson in 1877 under the name of *Cardiocarpon compressum*. *Proc. Camb. Phil. Soc.*, vol. xv., pp. 393-4.
- 14 ARMSTRONG, A. LESLIE.—Glacial Evidences near Harrogate. *Naturalist*, June, pp. 243-244.
- 15 — The Lost Towns of Holderness. A Glimpse of a Fast Vanishing Land. *The Tramp*, vol. ii., No. 3, Dec., pp. 223-229.
- 16 [BELINFANTE, L. L. : Edited by].—Abstracts of the Proceedings of the Geological Society of London. Session 1909-10, Nos. 882-896, pp. 110.
- 17 BEVAN, D. W.—Report on Geology, 1909 [for the Scarborough district : includes *Epiaster gibbus* 'an urchin new to Yorkshire.']. *Ann. Rep., Scarborough Phil. and Arch Soc.*, for 1909, pp. 30-31.
- 18 BILSON, JOHN—Newbald Church [built of 'Cave Oolite']. *Yorks. Arch. Journal*, pt. 81 (vol. xxi., pt. 1), pp. 1-43.
- 19 BIVER, PAUL.—Some Examples of English Alabaster Tables in France, made from material obtained from Nottinghamshire or Yorkshire in the middle ages. *Arch. Journ.*, vol. lxxvii., No. 265, March, pp. 64-87.
- 20 BONNEY, T. G.—Address [to the British Association for the Advancement of Science, dealing with the Glacial Deposits of Western Europe]. *Brit. Assoc.* (reprint), 32 pp. ; also *Nature*, Sept. 1st, pp. 274-284 ; Abstract

- in *Geol. Mag.*, Oct., pp. 463-469; Nov., pp. 513-519; *Scot. Geog. Mag.*, vol. xxvi., pp. 505-532; and [with title 'The Glacial History of Western Europe'] *Geog. Journ.*, vol. xxxvi., No. 5., Nov., pp. 596-599. See also criticism in *Naturalist*, Oct., pp. 351-357.
- 21 BONNEY, T. G.—[See Anon].
- 22 BRADSHAW, C.—[See Bernard Hobson].
- 23 BRAUNS, REINHARD, and L. J. SPENCER.—The Mineral Kingdom (parts 19-15, pp. 185-280).
- 24 BRODRICK, H.—Car Pot. *Yorks. Ramblers Club Journ.*, vol. iii., No. 10, pp. 174-176.
- 25 BUCKMAN, S. S.—Certain Jurassic (Lias-Oolite) Strata of South Dorset; and their Correlation [compares with Yorkshire Coast Sections]. *Quart. Journ. Geol. Soc.*, vol. lxvi., pt. 1, Feb., pp. 52-89.
- 26 ——— Yorkshire Type Ammonites, part 2 [figures *Hildoceras levisoni*, *Pseudoclioceras lythense*, *Denckmannia rudis*, *Haugia beanii*, *Rhacoceras ambiguum*, *Caloceras belcheri*, *C. convolutum*, *Echioceras exortum*, *Amaltheus lenticularis*, *Uptonia ignota*, *Paltopterooceras elaboratum*, *Frechiella subcarinata*]. London. Pp. xiii.-xvi., 12 plates, and descriptions Nos. 9-22.
- 27 BURTON, J. J.—Geological Section [of the Cleveland Club; Report on the work of, for 1908-9]. *Proc. Cleveland Nat. Field Club*, vol. ii., pt. 4, 1908-9, pp. 256-259.
- 28 ——— Report of the Geological Section [of the Cleveland Club, for 1909]. *Proc. Cleveland Nat. Field Club*, vol. ii., pt. 4., 1908-9, pp. 264-266.
- 29 ——— Geological Notes on the Middleton-in-Teesdale District. *Naturalist*, July, pp. 268-271.
- 30 CARRUTHERS, R. G.—On Zonal Work in Lower Carboniferous Rocks, with some remarks on the Collection of Fossils [reference to Yorkshire, etc.] *Trans. Geol. Soc., Glasgow*. Vol. xiv., pt. 1, 1909-10, pp. 65-73.
- 31 C[ARTER], W. LOWER.—In Memoriam, the Marquis of Ripon, K.G., G.C.S.I., LL.D., D.C.L., F.R.S. [refers to his connection with the Yorkshire Society]. *Proc. Yorks. Geol. Soc.*, vol. xvii., pt. 1, 1909, pp. 1-3.
- 32 CARTER, W. LOWER, and COSMO JOHNS.—Report of the Hon. Secretaries [of the Yorks. Geol. Soc.], 1909;

- [brief account of the Field Excursions]. *Proc. Yorks. Geol. Soc.*, vol. xvii., pt. 1., 1909, pp. 93-95.
- 33 C[HAPMAN], E. H., and H. P[OWER].—Notes on the Decay of the East Cliff at Whitby, drawn up at the request of the Council, by E. H. CHAPMAN and H. POWER, Esqrs. [Averaged 1 foot  $2\frac{1}{2}$  inches a year between 1849 and 1891]. *The 87th Rep. Whitby Lit. and Phil. Soc.*, p. 9.
- 34 CLARK, E. KITSON,—Leeds in Prehistoric Times [refers to remains of *Hippopotamus amphibius*, etc.]. *Thoresby Society's Publication: Miscellanea*, vol. xv., pt. 3, 1909, pp. 212-221.
- 35 COLE, MAULE E.—The recent cloud-burst in the Yorkshire Wolds. *Naturalist*, July, pp. 255-256.
- 36 CORNISH, VAUGHAN.—Waves of the Sea and other Water-waves [brief reference to Yorkshire, etc.]. Pp. 374.
- 37 COX, HERBERT S.—The Elements of Mining and Quarrying by Sir C. LE NEVE FOSTER. 2nd ed. [Brief references to Yorkshire geology]. Pp. xviii.+323.
- 38 CRICK, G. C.—Snakestones. *Naturalist*, April, pp. 145-146.
- 39 CROFTS, W. H.—[See G. W. B. Macturk].
- 40 CULPIN, H.—Carboniferous Flora and Fauna Committee [Report of, in Report Yorkshire Naturalists' Union for 1909]. *Naturalist*, Jan., pp. 68-69.
- 41 ——— Marine and other Fossils in the Yorkshire Coal Measures, above the Barnsley Seam, as seen at the Bentley Colliery, near Doncaster [with details of sections to 1927 feet, and lists of fossils]. *Proc. Yorks. Geol. Soc.*, vol. xvii., pt. 1, 1909, pp. 75-82.
- 42 ——— Marine Bands in the Yorkshire Coal Measures. *Naturalist*, Oct., pp. 375-6.
- 43 ——— [See J. H. Howarth].
- 44 DAVISON, CHARLES.—The Characteristics of British Earthquakes, Summary of Twenty-one Years' Work. *Geol. Mag.*, Sept., pp. 410-419.
- 45 DAWKINS, W. BOYD.—The Arrival of Man in Britain in the Pleistocene Age. (The Huxley Lecture for 1910). *Journ. Anthropol. Institute*, vol. xl., July-Dec., pp. 233-263.

- 46 DENHAM, H. E.—[Lias at] Aldborough. *Trans. Hull Geol. Soc.*, vol. vi., pt. 2, p. 131.
- 47 ——— [See J. H. Howarth].
- 48 ——— [See Thompson, C.].
- 49 DRAKE, HENRY CHARLES.—*Asteracanthus* in the Yorkshire Cornbrash. *Naturalist*, April, pp. 141-142.
- 50 ——— and THOMAS SHEPPARD.—Classified List of Organic Remains from the Rocks of the East Riding of Yorkshire [a list of all the known records from the lower lias to the post-glacial series of East Yorks; with Bibliographies]. *Proc. Yorks. Geol. Soc.*, vol. xvii., pt. 1, 1909, pp. 4-71.
- 51 DUNSTON, G.—Black Diamonds from the New Eastern Coalfield. *London*. Pp. 60.
- 52 DWERRYHOUSE, ARTHUR R.—The Earth and its Story [many references to Yorkshire]. *London*. Pp. 364.
- 53 DYSON, W. H.—The Occurrence of Marine Bands at Maltby. *Brit. Assoc. Leaflet*, and *Geol. Mag.*, Nov., pp. 520-521.
- 54 ELGEE, FRANK.—Notes on the Glacial Geology of the Country between Loftus and Kettlewell. *Proc. Cleveland Nat. Field Club*, vol. ii., pt. 4, 1908-9, pp. 203-205.
- 55 ——— Moorland Research in 1909 [describes peat beds]. *Proc. Cleveland Nat. Field Club*, vol. ii., pt. 4, 1908-9, pp. 209-213.
- 56 FARRER, R.—Gaping Ghyll. *Yorks. Ramblers' Club Journ.* vol. iii., No. 10, pp. 126-140.
- 57 FEARNSIDES, W. G.—[See J. E. Marr].
- 58 FOSTER, CLEMENT LE NEVE, and S. HERBERT COX.—A Treatise on Ore and Stone Mining. *London*. Pp. xxx. + 799.
- 59 GIBSON, WALCOT.—The Coal-measures of the Concealed Yorkshire, Nottinghamshire, and Derbyshire Coalfield [abstract]. *Brit. Assoc. Leaflet*, also *Geol. Mag.*, Oct., pp. 471-473.
- 60 ——— Notes on Three Borings in the Ingleton Coalfield. Appendix II. to *Summary of Progress of the Geol. Survey of Great Britain . . . for 1909*, pp. 71-72.
- 61 ——— [See Anon].

- 62 GILLIGAN, ALBERT.—Note on a Section in the Meanwood Ganister Quarry [describing a monoclinal fold]. *Trans. Leeds Geol. Assn.*, pt. 15, 1908-10, p. 40.
- 63 GREENWOOD, J. H. [and] MORTON E. WAGER.—Geology [of the Hebden Bridge District, including notes on the glacial geology of Upper Calderdale by A. NEWELL]. *Hebden Bridge Lit. and Sci. Soc. Records' Reports* for 1908-1909, pp. 18-19.
- 64 GREENWOOD, W. H.—Flood Entrance: Gaping Ghyll. *Yorks. Ramblers' Club Journ.*, vol. iii., No. 10, pp. 167-173.
- 65 HABERSHON, M. H., and F. W. HARDWICK.—The Mining Industries of the District [around Sheffield]. The *British Assoc. Handbook to Sheffield*, pp. 342-362.
- 66 HARDWICK, F. W.—[See M. H. Habershon].
- 67 HARGREAVES, J. A.—[See T. Sheppard].
- 68 HARMER, F. W.—The Glacial Geology of Norfolk and Suffolk [refers to Yorkshire glacial features]. *Trans. Norfolk and Norwich Nat. Soc.*, vol. ix., pt. 1, pp. 108-133, and reprinted in pamphlet. *London*. Pp. 1-26.
- 69 HAWKESWORTH, EDWIN.—A Boring at East Harlsey [through Lias, Rhætics, [?] and Keuper]. *Proc. Yorks. Geol. Soc.*, vol. xvii., pt. 1, 1909, pp. 72-73.
- 70 ——— A Boring at Selby [through sand and clay]. *Proc. Yorks. Geol. Soc.*, vol. xvii., pt. 1, 1909, p. 24.
- 71 ——— Recent Deposits in Airedale [abstract: reviews a paper written by the late Thomas Pridgin Teale in 1853]. *Trans. Leeds Geol. Assn.*, pt. xv., 1908-10, pp. 9-17.
- 72 ——— Some Boulder-like Masses (in Fireclay) at Kilnhurst [with photographs]. *Trans. Leeds Geol. Assn.*, pt. 15, 1908-10, pp. 17-18.
- 73 ——— Reports of Excursions [of the Leeds Geological Assn. for 1908-9, to Otley, Grassington, Clapham, Whitwood, Fryston, Woodlesford, Meanwood, Ingleton and Sedbergh]. *Trans. Leeds Geol. Assn.*, pt. 15, 1908-10, pp. 41-45.
- 74 [HAWKESWORTH, E., and COSMO JOHNS].—Geological Section [brief report of the work of; in Yorkshire Naturalists' Union Annual Report for 1909]. *Naturalist*, Jan., p. 65.

- 75 HEMINGWAY, WM.—Fossil Plants [abstract, referring to the Flora of the Coal-Measures]. *Trans. Leeds Geol. Assoc.*, pt. 15, 1908-10, pp. 33-35.
- 76 HERRIES, R. S.—East Yorkshire [Geology of]. *Geology in the Field*, pt. 3. London. Pp. 592-623.  
—— [See H. W. Monckton].
- 77 HICKLING, GEORGE.—The Anatomy of *Calamostachys Binneyana*, Schimper [from specimens found in coal-balls]. *Mem. and Proc. Manch. Lit. and Phil. Soc.*, vol. liv., pt. 3, 1909-10, No. 17, pp. 1-16.
- 78 HOBSON, BERNARD, COSMO JOHNS, C. BRADSHAW.—The Geology of the District [around Sheffield: Mr. Hobson contributes the Introductory account, Lower Carboniferous Volcanic Rocks, Limestone Shales, Millstone Grit Series, and Pleistocene; Mr. Cosmo Johns, the Carboniferous, the Mountain Limestone, the Permians, and the Trias; and Mr. C. Bradshaw, the Coal Measures]. *Brit. Assoc. Handbook*, pp. 363-404.
- 79 [HOWARTH, J. H., and J. W. STATHER, Hon. Secs.].—Glacial Committee [report of, including notes by H. CULPIN, C. THOMPSON, H. E. DENHAM, in Report of the Yorkshire Naturalists' Union for 1909]. *Naturalist*, Jan., pp. 66-68.
- 80 HOWE, J. ALLEN.—The Geology of Building Stones. London. Pp. viii.+455.
- 81 HULL, EDWARD.—Reminiscences of a Strenuous Life [brief reference to geology]. London. Pp. 150.
- 82 ILLINGWORTH, S. R.—The Shale Heap. Why should it be a Waste Heap? [the majority of the shales in the Yorkshire Coalfield yield a crude oil]. *Bradford Sci. Journ.*, vol. iii., No. 2, Oct., pp. 41-44.
- 83 JOHNS, COSMO.—Geology at the British Association. *The Naturalist*, Oct., pp. 358-360.
- 84 ——— On the Classification of the Lower Carboniferous Rocks. *Geol. Mag.*, Dec., pp. 562-564.
- 85 ——— The Lower Carboniferous Rocks of Mill Gill (Wensleydale). *Naturalist*, July, pp. 272-276.
- 86 ——— Geological Notes on the District North of Malham [with plan]. *Naturalist*, June, pp. 221-224.
- 87 ——— [See E. Hawkesworth].

- 88 JOHNS, COSMO.—[See W. Lower Carter].  
—— [See Bernard Hobson].
- 89 JOHNSTONE, MARY A.—A School week in the Country. Grange Road Secondary School, Bradford (Girls' Department) [includes geological notes], Board of Education. London. Pp. 36.
- 90 KENDALL, P. F.—Boulder Clay in Flamborough Caves. *Naturalist*, April, p. 181.
- 91 ——— The Geology of the Districts around Settle and Harrogate [prepared for the excursions of the Geologists' Assoc.]. July 26th, pp. 34.
- 92 LAMPLUGH, G. W.—In Memoriam: John Roche Dakyns (1836-1910) [refers to his work in Yorkshire, with Bibliography by T. S[HEPPARD]]. *Naturalist*, Nov., pp. 384-387.
- 93 ——— Notes on British Late-Glacial and Post-Glacial Deposits. *Postglaziale Klimaveränderungen*. Stockholm. Pp. 51-54.
- 94 ——— Estuarine Shells in the Alluvial Hollow of Sand-le-Mere near Withernsea in Holderness. *Naturalist*, Jan., pp. 7-11.
- 95 LANE, GEORGE J.—Notes on the Jurassic Flora of Cleveland. *Proc. Cleveland Nat. Field Club*, vol. ii., pt. 4, 1908-9, pp. 206-207.
- 96 ——— and T. SAUNDERS.—Oolitic plant remains in Yorkshire [from Marske]. *Naturalist*, Jan., pp. 15-16.
- 97 LEVERETT, FRANK.—Comparison of North America and European Glacial Deposits. Berlin. *Zeitschrift für Gletscherkunde*, vol. iv., pp. 241-316. See *Naturalist*, Dec., pp. 416-418.
- 98 LOTHERINGTON, E. B.—Microscopy of Flints [Records foraminifera (not named) from flint nodules at Flamborough, etc.]. *Ann. Rep., Scarborough Phil. and Arch. Soc.* for 1909, p. 30.
- 99 MACNAIR, PETER.—Introduction to the Study of Minerals and Guide to the Mineral Collections in Kelvingrove Museum, Glasgow. Pp. 70.
- 100 MACTURK, G. W. B.—[Boulders at] South Cave. *Trans. Hull Geol. Soc.*, vol. vi., pt. 2, p. 130.
- 101 ———, W. H. CROFTS, and J. W. STATHER.—Notes on the Field Excursions [of the Hull Geological Society] in the

- years 1905-9 [with lists of fossils from various localities].  
*Trans. Hull Geol. Soc.*, vol. vi., pt. 2, pp. 132-141.
- 102 MARR, J. E. and W. G. FEARN SIDES.—Notes on the Lower Palæozoic Rocks of the Cautley District, Sedbergh, Yorks. [abstract]. *Brit. Assoc. Leaflet*, 1 p., and *Geol. Mag.*, Oct., p. 474.
- 103 MASLEN, A. J.—[See D. H. Scott].
- 104 MATTHEWS, E. R.—Yorkshire Coast Erosion Committee. [Report of, in Report Yorkshire Naturalists' Union for 1909]. *Naturalist*, Jan., p. 68.
- 105 MAUFE, H. BRANTWOOD.—The Origin of Chellow Dean. *Bradford Sci. Journ.*, No. 24, vol. ii., April, pp. 357-360.
- 106 MCKAY, G. T.—Fault Revelation through the Agency of Underground Water, near Hawes, Wensleydale, with additional note on the Buttertubs. *Naturalist*, April, pp. 169-170.
- 107 MELLOR, A. L.—The Chew Reservoir of the Ashton-under-Lyne, Stalybridge, and Dukinfield District Waterworks [with sections]. *Trans. Manch. Geol. and Min. Soc.*, vol. xxxi., pts. 9 and 10, pp. 169-171.
- 108 MONCKTON, H. W. and R. S. HERRIES [edited by]. *Geology in the Field. The Jubilee Volume of the Geologists' Association (1858-1908)*. London. Pp. 896. Reviewed in *Geol. Mag.*, Aug., pp. 370-1.
- 109 MURLEY, ARTHUR M.—Recent Geological and Archæological Notes. *Proc. etc., Hull Junior Field Nat. Soc.*, vol. i., pt. 1.
- 110 NAYLOR, E.—Chellow Dean [brief geological notes]. *Bradford Sci. Journ.*, No. 24, vol. ii., Oct., pp. 353-356.
- 111 NETTLETON, STANLEY.—Cannel and its Affinities [abstract referring to the Adwalton Stone Coal]. *Trans. Leeds Geol. Assn.*, part 15, 1908-10, pp. 30-33.
- 112 PARSONS, E.—Reef Knolls [abstract describing those in the Clitheroe and Craven districts]. *Trans. Leeds Geol. Assoc.*, pt. 15, 1908-10, pp. 38-39.
- 113 PINFOLD, E. S.—A Local Peat Bed [between two blue clays at the Wrose Brow Brick Works]. *Bradford Sci. Journ.*, No. 23, Jan., p. 345.
- 114 POWER, H.—[See E. H. Chapman].
- 115 'RECORDER.'—[See under Anon.].



- 116 RICHARDSON, L.—On the Correlation of the Neozoic Rocks of Yorkshire [compares the Yorkshire Oolites, etc. with those of Gloucestershire, etc.]. *Proc. and Rep. Ashmolean Nat. Hist. Soc. of Oxfordshire* for 1909, pp. 32-41.
- 117 ROBERTS, E. E.—Sunset Hole. *Yorks. Ramblers' Club Journ.*, vol. iii., No. 10, pp. 177-185.
- 118 RULE, A.—Gaping Ghyll. *Yorks. Ramblers' Club Journ.*, vol. iii., No. 10, pp. 186-192.
- 119 SAUNDERS, T.—[See George F. Lane].
- 120 SCOTT, D. H. and A. J. MASLEN.—On *Wesolayton*, a new genus of Cordaitales. Preliminary Note. *Annals of Botany*, vol. xxiv., 1910, pp. 236-239.
- 121 SEWARD, A. C.—Fossil Plants, a Text-book for Students of Botany and Geology, vol. ii., *Cambridge*. Pp. xxii. + 624.
- 122 ——— Comparisons of Jurassic Floras. *Nature*, vol. lxxxv., pp. 258-9.
- 123 SHEPPARD, T.—Recent Geological Work in the Humber District [a summary of the various papers which have appeared during the past few years]. *Trans. Hull Geol. Soc.*, vol. vi., pt. 2, pp. 112-129.
- 124 ——— Lias fossils from the Drift [*Platypleurocceras aureum* and *P. birchoides*]. *Naturalist*, June, p. 245.
- 125 ——— Rhinoceros [*R. antiquatis*] Tooth at Dimlington, East Yorks. *Naturalist*, February, p. 94.
- 126 ——— On a Specimen of *Eryon antiquus* Broderip, from the Yorkshire Lias [reprinted from *Naturalist* for Jan., 1909]. *Proc. Hull Junior F. Nat. Soc.*, vol. i., pt. 1, pp. 13-15.
- 127 ——— [*Belemnites lanceolatus* in black flint at] Witherinsea [and boulders at] Dimlington. *Trans. Hull Geol. Soc.*, vol. vi., pt. 2, pp. 130-131.
- 128 ——— Bibliography. List of papers referring to the Geology and Palæontology of East Yorkshire and North Lincolnshire, 1906-9. *Trans. Hull Geol. Soc.*, vol. vi., pt. 2, pp. 142-165.
- 129 ——— A Buried Valley at North Sea Landing, Flamborough [exposed during a recent landslide]. *Geol. Mag.*, Aug., pp. 356-7.

- 130 SHEPPARD, T.—Large Scandinavian Erratic in East Yorkshire [Augite-syenite at Hessle]. *Naturalist*, Dec., p. 450. Also *Hull Museum Publication* No. 76, Dec., p. 12.
- 131 [SHEPPARD, T.].—A 'Faked' Fossil Fish; Liassic Plesiosaurs; 'Snakestones' New Lincolnshire Belemnites. *Naturalist*, March, pp. 106-107.
- 132 ——— Tooth of *Elephas antiquus* in Holderness. *Naturalist*, Oct., p. 360, and *Hull Museum Publication* No. 74, Sept., p. 298.
- 133 ——— The Glacial History of Holderness [abstract]. *Trans. Leeds Geol. Assoc.*, part 15, 1908-10, pp. 21-23.
- 134 S[HEPPARD], T.—The Natural History of Kirkby Moorside [includes geological notes]. *Naturalist*, Nov., pp. 399-407.
- 135 ——— Boring at Hull. *Naturalist*, April, p. 181.
- 136 ——— Yorkshire Naturalists at Scarborough [with geological notes by J. A. HARGREAVES]. *Naturalist*, Jan., pp. 25-27.
- 137 ——— [See Henry C. Drake].
- 138 ——— [See G. W. Lamplugh].
- 139 SPENCER, L. J.—[See Reinhard Brauns].
- 140 [STATHER, A. J., Hon. Sec.].—The Geological Photographs Committee [report of, in Yorkshire Naturalists Union Report for 1909]. *Naturalist*, Jan., pp. 65-66.
- 141 STATHER, J. W.—The Bielsbeck Fossiliferous Beds [with particulars of excavations, and of Pleistocene fauna and flora]. *Trans. Hull Geol. Soc.*, vol. vi., pt. 2, pp. 103-109.
- 142 ——— The Speeton 'Shell-Bed' [with list of Pleistocene shells, etc.] *Trans. Hull Geol. Soc.*, vol. vi., pt. 2, pp. 110-111.
- 143 ——— [Speeton Clay at] Mappleton. *Trans. Hull Geol. Soc.*, vol. vi., pt. 2, p. 131.
- 144 ——— Sections at Gristhorpe and Marfleet. *Trans. Hull Geol. Soc.*, vol. vi., pt. 2, p. 132.
- 145 ——— (Secretary).—Investigation of the Fossiliferous Drift Deposits at Kirmington, Lincolnshire, and at various localities in the East Riding of Yorkshire [Bielsbeck]. *Rep. Brit. Assoc.*, Winnipeg, 1909, pp. 177-180.
- 146 ——— [See J. H. Howarth].
- 147 ——— [See G. W. B. Macturk].

- 148 STEAD, J. E.—Cleveland Ironstone and Iron. A paper [with various analyses, etc.], read before the Cleveland Institution of Engineers, February 7th, pp. 45, 16 plates.
- 149 ——— Cleveland Ironstone and Iron. *Proc. Cleveland Inst. of Engineers*, Session 1909-10, pp. 75-117.
- 150 STRAHAN, AUBREY.—Guide to the Geological Model of Ingleborough and District [in the Museum, Jermyn Street]. *Memoirs Geol. Survey*, pp. 17.
- 151 STOPES, MARIE C.—Ancient Plants, being a simple account of the past vegetation of the earth and of the recent important discoveries made in this realm of nature study. [Yorkshire, etc., specimens, figured and described]. pp. 198+viii.,
- 152 TAYLOR, JOHN W.—Monograph of the Land and Fresh water Mollusca of the British Isles. Part 17 [deals with the distribution etc. (including fossils forms) of *Helix pomatia*, *H. aspersa* and *H. nemoralis*]. Pp. 225-304, July 9th.
- 153 TEALE, THOMAS PRIDGEN.—[See E. Hawkesworth].
- 154 THOMPSON, C.—[See J. H. Howarth].
- 155 ——— Notes on two large Ammonites from the Holderness Drift [*Asteroceras acceleratum* and *A. stellare*]. *Naturalist*, July, pp. 257-259.
- 156 ——— [Lias fossils at] Hornsea. *Trans. Hull Geol. Soc.*, vol. vi., pt. 2, p. 131.
- 157 ——— [Ammonites at] Aldborough. *Trans. Hull Geol. Soc.*, vol. vi., pt. 2, p. 131.
- 158 ——— The Fossil Cephalopoda of the Holderness Drift [with lists of derived fossils, arranged according to strata]. *Trans. Hull. Geol. Soc.*, vol. vi., pt. 2, pp. 95-98.
- 159 ——— The Belemnites of the Yorkshire Lias [correlates with species found in other areas in Britain]. *Trans. Hull. Geol. Soc.*, vol. vi., pt. 2, pp. 99-102.
- 160 ——— and H. E. DENHAM.—[Speeton Clay at] Aldborough. *Trans. Hull Geol. Soc.*, vol. vi., pt. 2, p. 130.
- 161 VAUGHAN, A. (Secretary).—Faunal Succession in the Lower Carboniferous Limestone (Avonian) of the British Isles.

- Report of the Committee. *Rep. Brit. Assoc.*, Winnipeg, 1909, pp. 187-191.
- 162 WAGER, MORTON E.—[See J. H. Greenwood],
- 163 WATNEY, [Miss] G. R., and [Miss] E. G. WELCH,—The Graptolitic Zones of the Salopian Rocks of the Cautley Area near Sedburgh, Yorkshire. [Abstract]. *Brit. Assoc. Leaflet and Geol. Mag.*, Oct., pp. 473.
- 164 WATSON, D. M. S.—‘Upper Liassic Reptilia, part 2. The Sauropterygia of the Whitby Museum’ [describes *Pleisiosaurus propinquus* in detail, and gives particulars of other remains]. *Mem. and Proc. Manch. Lit. and Phil. Soc.*, vol. liv., pt. 3, 1909-10, No. xi., pp. 1-13. Abstract in *Nature*, March 31st, p. 148.
- 165 WATTS, W. W.—The Physical Environment in Geology, etc. [chapters on Denudation; Deposition; Clastic Rocks; History of Landscape; History from the Rocks; the Geological Record; the Growth of Britain; Maps, etc., with illustrations drawn from Yorkshire]. *The Book of Nature Study*, vol. vi., pp. 92-222.
- 166 ——— Fifty Years’ Work of the Geologists’ Association [references to numerous papers, printed by the Association, several of which bear upon the geology of Yorkshire. *Proc. Geol. Assoc.*, vol. xxi., pt. 8, pp. 401-424.
- 167 WELCH [Miss] E. G.—[See [Miss] G. R. Watney].
- 168 WILMORE, ALBERT.—On the Carboniferous Limestone south of the Craven Fault (Grassington-Hellifield District). *Quart. Journ. Geol. Soc.*, No. 264, vol. lxvi., pt. 4, Nov., pp. 523-538. Abstract in *Geol. Mag.*, June, p. 286.
- 169 [WILSON, J. E.]—Geology of Craven [brief summary]. *Trans. Caradoc and Severn Valley Field Club*, vol. v., No. 1, Feb., p. 50.
- 170 WILSON, G. V.—Marine Bands in the Millstone Grit of Wharfedale [at Otley and Fewston]. *Proc. Yorks. Geol. Soc.*, vol. 17, pt. 1, 1909, pp. 83-86.
- 171 WINTER, W. P.—Shipley Glen. An explanatory outline of its principal features for the interested lover of our country [physiographical notes]. *Bradford Sci. Journ.* vol. iii., No. 1, July, pp. 1-11. Part 2, *loc. cit.*, No. 2, Oct., pp. 33-41.

- 172 WOODWARD, HORACE B.—The Geology of Water Supply.  
xii.+340 pp.
- 173 W[OODWARD], H. B.—Obituary: Charles Edward Fox-Strangways, F.G.S. [refers to his work in Yorkshire, etc., and gives list of memoirs]. *Geol. Mag.*, May, pp. 235-238.
- 174 WRIGHT, WILLIAM.—[See Geo. W. Young].
- 175 YOUNG, GEO. W. and WILLIAM WRIGHT.—A Classified Index to the Contents of the Proceedings of the Geologists' Association, vols. i-xx. *Proc. Geol. Assoc.*, vol. xxi., pt. 7, March, pp. 1-40.

## 1911.

- 1 ANON.—York Stone. The Quarries of Messrs. Harper Bros., Eccleshill, Bradford, Yorks. *Quarry*, Sept., pp. 269-271.
- 2 ——— Cleveland Ironstone and Iron. [Notice of Mr. J. E. Stead's paper published in 1910]. *Geol. Mag.*, June, p. 274.
- 3 ——— The Wonders of Filey. [Brief reference to slabs of fossils]. *Naturalist*, June, p. 210.
- 4 ——— Geological Notes [on the Ingleton District]. *Rep. and Proc. Manchester Field Nat. and Arch. Soc.* for 1910, p. 41.
- 5 ——— Royal Commission on Coast Erosion and Afforestation, vol. iii., pt. 1. Third (and Final) Report. *London*. Pp. 178.
- 6 ——— Abstracts of the Proceedings of the Geological Society of London, Session 1910-11. Nos. 897-912, pp. 1-115.
- 7 ——— Catalogue of the More Important Papers, especially those relating to Local Scientific Investigations, published by the Corresponding Societies [of the British Association] during the year ending May 31st, 1910. *Rep. Brit. Assoc.* (Sheffield) for 1910, pp. 327-344.
- 8 ARBER, E. A. NEWELL.—On the Fossil Flora of the Southern Portion of the Yorkshire Coalfield in North Derbyshire and Nottinghamshire. *Proc. Yorks. Geol. Soc.*, vol. xvii., pt. 2, 1910, pp. 132-155.
- 9 ——— The Natural History of Coal. [Brief references to Northern Counties]. *Cambridge*. Pp. 163.

- 10 ARMSTRONG, A. LESLIE.—Glacial Evidences near Harrogate. *Naturalist*, March, pp. 117-118.
- 11 BARRETT-HAMILTON, GERARD E. H.—A History of British Mammals. Part vi. [refers to fossil remains in Teesdale Caves, Yorks.].
- 12 [BATHER, FRANCIS ARTHUR].—A Guide to the Fossil Invertebrate Animals in the Departments of Geology and Palæontology in the British Museum (Natural History). Second Edition. Pp. x.+184.
- 13 [BELINFANTE, L. L.].—Geological Literature added to the Geological Society's Library during the year ended December 31st, 1910. Pp. 218.
- 14 ——— [Edited by].—Abstracts of the Proceedings of the Geological Society of London. Session 1910-11, Nos. 897-912, pp. 115.
- 15 BELL, A.—[See A. R. Derryhouse].
- 16 BENNEY, A. E.—The Yellow Clay [in the Bradford District]. *Bradford Sci. Journ.*, vol. iii., pt. 6, Oct., pp. 182-186.
- 17 BENSON, G.—York, from its origin to the end of the eleventh century. [Includes geological notes]. *York*. Pp. xii. 95.
- 18 BINGLEY, GODFREY.—[See W. W. Watts].
- 19 BOLTON, HERBERT.—Faunal Horizons in the Bristol Coalfield [compares with the Yorkshire Coalfield, etc.]. *Quart. Journ. Geol. Soc.*, vol. lxxvii., pt. 3 (No. 267), Aug., pp. 316-341.
- 20 BONNEY, T. G.—Address by . . . President [Glacial Geology, etc. of Western Europe]. *Rep. Brit. Assoc.*, 1910, pp. 3-34.
- 21 BRADSHAW, C.—[See Bernard Hobson].
- 22 BRAUNS, REINHARD, and L. J. SPENCER.—The Mineral Kingdom (pt. 16, pp. 281-296).
- 23 BRODRICK, HAROLD—Swinsto Cave and some others. *Yorks. Ramblers' Club Journ.*, vol. iii., pt. 2, pp. 291-295.
- 24 BROWN, GEO. H.—On the Craven Fault; Along the foot of Giggleswick Scar. *Settle*. Pp. 24.
- 25 BUCKMAN, S. S.—Yorkshire Type Ammonites. Pt. 3, pp. iii.-vi., 9 plates and Descriptions, Nos. 23-30 [with figures of *A. birdi*, *A. depressus*, *A. figulinus*, *A. omissus*, *A. aureolus*, *A. vortex*, and *A. turriculatus*]; Part 4,

- [with Descriptions and Illustrations of *Ammonites semicelatus*, *cornutus*, *quadricornutus*, *fabricatus*, *radiatus arctus*, and *nautiliformis*] ; Part v. [describes *Ammonites sulcatus*, *scoresbyi*, *acuticarinatus*, *compactilis*, *whitbiense*, *lectus* and *miles*]. Plates xxxviii.-xliv., and Descriptions, Nos. 38-44.
- 26 BURTON, J. J.—[See J. W. Stather].
- 27 BUTLER, FRANCIS H.—The Brecciation of Mineral Veins. [Cites instances at Grassington]. *Mineral Mag.*, vol. xvi., No. 74, Oct., pp. 124-136.
- 28 CARTER, J. W. and COSMO JOHNS.—Report of the Honorary Secretaries [of the Yorkshire Geological Society] for 1910. *Proc. Yorks. Geol. Soc.*, vol. xvii., pt. 2, 1910, pp. 163-167.
- 29 CLARK, E. KITSON.—A Prehistoric Route in Yorkshire. [Brief Geological notes]. *Proc. Soc., Antiq. London*. 2nd ser., vol. xxiii., No. 2, pp. 309-325.
- 30 COLE, GRENVILLE A. J., and OTWAY H. LITTLE.—The Mineral Condition of the Calcium Carbonate in Fossil Shells. [Refers to Robin Hood's Bay specimens, etc.]. *Geol. Mag.*, Feb., pp. 49-55.
- 31 COLLINGWOOD, W. G.—Anglian and Anglo-Danish Sculpture in the East Riding, with Addenda to the North Riding. [Brief references to the origin of the stones]. *Yorks. Arch. Journ.*, pt. 83 (vol. xxi., pt. 3), pp. 254-302.
- 32 CRAIG, STERLING.—Secrets of the Hills and how Ronald read them. [Yorkshire and other Northern Counties]. *London*. Pp. 320.
- 33 CROSSLAND, CHAS.—Contributions to Halifax Bibliography and Authors. Pt. iii. (Natural History) [includes Geology]. *Trans. Halifax Antiq. Soc.*, pp. 253-298.
- 34 CULPIN, H.—Marine Bands in the Yorkshire Coal-Measures. *Rep. Brit. Assoc.* (Sheffield), 1910, p. 610.
- 35 DRAKE, H. C.—Report for Geology, 1910 [includes several records in the Scarborough District]. *Ann. Rep. Scarborough Phil. and Arch. Soc.*, for 1910, p. 31.
- 36 DRAKE, HENRY CHARLES.—*Asteracanthus* in the Coralline Oolite [at Seamer]. *Naturalist*, March, p. 130.
- 37 DWERRYHOUSE, A. R. (Secretary).—Erratic Blocks of the British Isles. Report of the Committee [includes re-

- ports from [D.] Woolacott, —. Smythe, A. Bell, G. Weyman, E. Merrick, C. Thompson, [J. W.] Stather]. *Rep. Brit. Assoc.* (Sheffield), 1910, pp. 100-106.
- 38 DYSON, WM. H.—The Occurrence of Marine Bands at Maltby. *Rep. Brit. Assoc.* (Sheffield), 1910, pp. 610-611.
- 39 FARRINGTON, OLIVER CUMMINGS.—Analyses of Stone Meteorites [includes the Middlesbrough example]. *Field Museum of Natural History, Publication 151* (Geological Series), vol. iii., No. 9, June 1st, pp. 195-229.
- 40 FEARNSIDES, W. G.—[See J. E. Marr].
- 41 FLETCHER, J. S.—Nooks and Corners of Yorkshire. [Very brief references to Coast Erosion, etc.]. *London*. Pp. 304.
- 42 GARWOOD, E. J.—The Lower Carboniferous Succession in the North-West of England. Abstract in *Nature*, June 15th, p. 540; *Geol. Mag.*, July, pp. 328-330.
- 43 GIBSON, WALCOT.—The Coal Measures of the Concealed Yorkshire, Nottinghamshire and Derbyshire Coalfield. *Rep. Brit. Assoc.* (Sheffield), 1910, pp. 609-610.
- 44 GILLIGAN, A. and E. L. HUMMEL.—Alluvial Deposits at Woodlesford. *Trans. Leeds Geol. Assoc.*, pt. xvi., 1910-11, pp. 24-26.
- 45 GUY, ERNEST.—On the Formation of Cavities in the Magnesian Limestone. *Trans. Leeds Geol. Assoc.*, pt. xvi., 1910-11, pp. 10-15.
- 46 GWINNELL, RUSSELL F.—Fossil Weather. [Refers to the Yorkshire meteorite, Lancashire sandstones, etc.]. *Marvels of the Universe*, pt. iv., pp. 173-177.
- 47 HARKER, A.—Some Aspects of Modern Petrology. [Presidential Address to Section C, British Association]. Portsmouth. Pp. 1-12. Also in *Nature*, Sept. 7th, pp. 319-324.
- 48 HASTINGS, CUTHBERT.—Sleets Ghyll and Dowka Bottom Caves [with plan of Sleets Ghyll]. *Yorks. Ramblers' Club Journ.*, vol. iii., pt. 2, pp. 288-290.
- 49 HAWKESWORTH, E.—Notes on Permian Boulders found at Rothwell Haigh. *Trans. Leeds Geol. Assoc.*, pt. xvi., 1910-11, p. 31.
- 50 ——— Reports of Excursion [of the Leeds Geological Association to Ardsley, Brimham Rocks, Ilkley, Clapham,



- and Rothwell Haigh]. *Trans. Leeds Geol. Assoc.*, pt. xvi., 1910-11, pp. 32-35.
- 51 HICKLING, GEORGE.—Geology. Chapters of Earth History. *London*. Pp. 136.
- 52 HILL, W.—Flint and Chert (Presidential Address, delivered February 3rd, 1911). *Proc. Geol. Assoc.*, vol. xxii., pt. 2, pp. 61-94.
- 53 HILL, WILLIAM.—Excursion [of the Geological Association] to Arlesley and Letchworth. [Flints resemble those of Yorkshire]. *Proc. Geol. Assoc.*, vol. xxii., pt. 1, pp. 8-11.
- 54 HOBSON, BERNARD, COSMO JOHNS, C. BRADSHAW.—The Geology of the [Sheffield] District. [Reprinted from the Sheffield Handbook of the British Association]. *Proc. Sheffield Nat. Club*, vol. i., 1910, pp. 7-48.
- 55 HORWOOD, A. R.—On the Layers of the Molluscan Shell. [Refers to fossils from Whitby, etc.]. *Geol. Mag.*, Sept., pp. 406-418.
- 56 HOWARTH, E. and H. M. PLATNAUER.—Directory of Museums in Great Britain and Ireland. [Refers to Geological, etc., contents of Museums]. Pp. 312.
- 57 HUMMEL, E. L.—[See A. Gilligan].
- 58 JACKSON, J. WILFRID.—On *Unio distortus* Bean, and *Alasmodon vetustus* Brown, from the Upper Estuarine Beds of Gristhorpe, Yorks. *Naturalist*, Feb., pp. 104-107; March, pp. 119-122.
- 59 ——— *Strophodus* teeth in the Corallian Beds of Malton. *Naturalist*, April, p. 151.
- 60 ——— A New Species of *Unio* from the Yorkshire Estuarine Series; with notes on other forms. [Describes *Unio kendalli* from Saltwick, etc.]. *Naturalist*, June, pp. 211-215.
- 61 JOHNS, COSMO.—On the Equivalence of the Yoredale and Pendleside Series. *Naturalist*, Jan., pp. 9-14.
- 62 ——— Report for Geological Section [of Yorkshire Naturalists' Union; in Yorkshire Naturalists' Union Annual Report for 1910]. *Naturalist*, Jan., pp. 63-64.
- 63 ——— Fossil Fauna and Flora of the Carboniferous Rocks Committee [in the Annual Report of the Yorkshire Naturalists' Union for 1910]. *Naturalist*, pp. 67-68.
- 64 ——— [See J. W. Carter].

- 65 JOHNS, COSMO.—[See Bernard Hobson].
- 66 JOHNSTONE, J. W. H.—Composition of the Upper Permian Limestone in South Yorkshire [analyses]. *Naturalist* Sept., p. 308.
- 67 JUDD, JOHN W.—The Student's Lyell. *London*. Pp. 56+645.
- 68 JUKES-BROWNE, A. J.—The Building of the British Isles. Ed. 3, pp. xv.+470. *London*. [See review in *Geol. Mag.*, July, pp. 316-320].
- 69 KENDALL, PERCY FRY.—On the Concealed Portion of the Yorkshire, Derbyshire and Nottinghamshire Coalfield. *Rep. Brit. Assoc.* (Sheffield), 1910, pp. 608-9.
- 70 ——— The Geology of the Districts around Settle and Harrogate. *Proc. Geol. Assoc.*, vol. xxii., pt. 1, pp. 27-60.
- 71 KIDSTON, ROBERT.—Les Végétaux Houillers recueillis dans le Hainaut Belge et se trouvant dans le Collections du Musée royal d'Histoire naturelle à Bruxelles. [Reviewed at length by E. A. N. A[rber] in *Nature*, Sept. 28th, pp. 418-420 ; contains references to Yorkshire, etc., specimens]. *Mém. du Musée royal d'Hist. nat. de Belgique*, tome iv., année 1909 [published 1911], pp. iv.+282 and 24 plates.
- 72 KING, W. NORMAN.—'The Cleveland Dyke.' *Trans. Leeds Geol. Assoc.*, pt. xvi., 1910-11, pp. 16-23.
- 73 LAMPLUGH, G. W.—On Movements in Rocks. [Cites examples at Scarborough, Isle of Man, etc.]. *Naturalist*, May, pp. 180-183.
- 74 ——— In Memoriam, Charles Edward Fox-Strangways, F.G.S. (1844-1910). *Proc. Yorks. Geol. Soc.*, vol. xvii., pt. 2, 1910, pp. 156-158.
- 75 ——— In Memoriam, John Roche Dakyns, M.A. (1836-1910). [The same notice that appeared in *Naturalist* for Nov., 1910, but the Bibliography is not given again]. *Proc. Yorks. Geol. Soc.*, vol. xvii., pt. 2, 1910, pp. 159-162.
- 76 L[AMPLUGH], G. W. John Robert Mortimer, Born 1825. Died 1911 [obituary notice ; refers to Mortimer's geological work in East Yorkshire]. *Geol. Mag.*, Oct., pp. 479-480.
- 77 LITTLE, OTWAY H.—[See Grenville A. J. Cole].
- 78 LOMAX, JAMES.—The Microscopic Examination of Coal,

- and its use in determining the inflammable constituents present therein. *Trans. Manchester Geol. Soc.*, vol. xxxii., pts. 8 and 9, pp. 122-141. Report in *Lancs. Nat.*, p. 243.
- 79 LOUIS, HENRY.—On the Mutual Developments of Metallurgy and Engineering. [Refers to early lead mining in Yorkshire, etc.]. *Proc. Univ. Durham Phil. Soc.*, vol. iv., pt. 2, pp. 1-18.
- 80 MARGERISON, S.—[See T. Sheppard].
- 81 MARR, J. E. and W. G. FEARNSIDES.—Notes on the Lower Palæozoic Rocks of the Cautley District, Sedbergh, Yorkshire. *Rep. Brit. Assoc.* (Sheffield), 1910, p. 603.
- 82 MARSH, MARGARET COLLEY.—Studies in the Morphogenesis of certain Pelecypoda. (3) The Ornament of *Trigonia clavellata* and of some of its Derivatives [refers to *T. literata* from the Upper Lias of Robin Hood's Bay, etc.]. *Mem. and Proc. Manchester Lit. and Phil. Soc.*, vol. lv., pt. 2, Memoir No. 15, pp. 1-13.
- 83 MERRICK, E.—[See A. R. Dwerryhouse].
- 84 MILES, Geo. T. J. and WILLIAM RICHARDSON.—A History of Withernsea. [Brief Geological notes]. *Hull. Pp.* x.+286.
- 85 MILLHOUSE, W.—A New Boring in the Vale of Pickering [depth of 165 feet]. *Naturalist*, May, pp. 194-6.
- 86 [NEWBITT, T.] (not signed).—Description of a small Ironstone Smelting furnace, found on the Moors near Whitby. *88th Report, Whitby Lit. and Phil. Soc.* for 1910, p. 11.
- 87 — (not signed).—Catalogue of Oolite Fossil Plants found in the Whitby cliffs, together with the Museum numbers of the specimens exhibited in the Whitby Museum. *88th Rep. Whitby Lit. and Phil. Soc.*, for 1910, pp. 23-26.
- 88 PARIS, E. TALBOT.—Notes on some Species of *Gervillia* from the Lower and Middle Jurassic Rocks of Gloucestershire [includes Yorkshire examples]. *Proc. Cotteswold Nat. F. Club*, vol. xvii., pt. 2, pp. 237-254.
- 89 — Note on *Gervillia acuta* Auctt. non Sowerby (*Gervillia Scarburgensis* nom. nov.) from the Scarborough Limestone. *Proc. Cotteswold Nat. F. Club*, vol. xvii., pt. 2, pp. 255-6.
- 90 PETCH, T.—Coast Erosion at Aldborough, East Yorkshire.

- [Measurements from different parts between 1893 and 1911]. *Naturalist*, Nov., p. 381.
- 91 PICKERING, G. F.—'Notes on the Lithology of the Millstone Grit (Rough Rock), of Horsforth, near Leeds. *Trans. Leeds Geol. Assoc.*, pt. xvi., 1910-11, pp. 27-30.
- 92 PICKERING, W. H.—Quarries Inspection Report, 1909. Report on the Yorkshire and Lincolnshire District (No. 5). *Quarry*, Jan., pp. 13-15.
- 93 PLATNAUER, H. M.—[See E. Howarth].
- 94 REES, W. D. WOOD.—A History of Barmby Moor. [Brief geological notes]. *Pocklington*, Pp. 109.
- 95 REID, CLEMENT.—The Relation of the Present Plant Population of the British Isles to the Glacial Period. *Brit. Assoc. Leaflet*, pp. 4; *Naturalist*, Nov., pp. 373-379, and *Irish Naturalist*, Dec., pp. 201-209.
- 96 RICHARDSON, WILLIAM.—[See Geo. T. J. Miles].
- 97 REYNOLDS, S. H.—[See W. W. Watts].
- 98 RULE, ALEXANDER.—Gaping Ghyll in 1911. [Refers to a plan of the ghyll]. *Yorks. Ramblers' Club Journ.*, vol. iii., No. 2, pp. 286-7.
- 99 SCOTT, DUKINFIELD HENRY.—The Evolution of Plants. *London*. Pp. 256.
- 100 SEWARD, A. C.—Links with the past in the Plant World. [Refers to Yorkshire fossil plants]. *Cambridge*. Pp. viii. + 142.
- 101 ——— Links with the Past in the Plant World. [Refers to Whitby specimens, etc.]. *Nature*, Oct. 12th, pp. 502-506.
- 102 ——— The Jurassic Flora of Yorkshire [compares with the Jurassic Floras of other parts of the world; being the Presidential Address to the Yorkshire Naturalists' Union]. *Naturalist*, Jan., pp. 1-8; Feb., pp. 85-94.
- 103 SHARPE, HILDA D.—Field Note Book of Geological Illustrations. *Manchester*. Pp. 52.
- 104 SHEPPARD, GEORGE.—Mammoth Tusk at Withernsea. *Naturalist*, May, p. 191.
- 105 SHEPPARD, T.—Two Neolithic Axe Heads from Holderness [one made of Borrowdale Ash]. *Naturalist*, Jan., p. 18.
- 106 ——— Bibliography: Papers and Records published with respect to the Geology and Palæontology of the North

of England (Yorkshire excepted) during 1909 (162 items).  
*Naturalist*, July, pp. 257-270.

- 107 SHEPPARD, T.—Extinct Animals of East Yorkshire. [Describes pre-glacial, glacial and post-glacial mammalian, etc., remains]. *Naturalist*, June, pp. 225-230.
- 108 ——— Tooth of Mammoth from Kelsey Hill (9 lbs. weight). *Hull Museum Publications*, No. 78, June, p. 15.
- 109 SHEPPARD, THOS.—East Yorkshire History in Plan and Chart. [Discusses Coast changes]. *Hull Lit. Club Mag.*, vol. iv., pt. 2, pp. 120-123.
- 110 SHEPPARD, THOMAS.—Hull Museums Annual Report for 1910. *Hull Museum Publications*, No. 84 [includes Geological notes]. Pp. 23.
- 111 ——— Hull Museum Publications, No. 83. *Quart. Record of Additions*, No. xxxviii. (illustrated) [includes brief Geological notes]. Sept. Pp. 16.
- 112 ——— The Evolution of Kingston-upon-Hull, as shewn by its Plans. *Hull*. Pp. 203.
- 113 ——— [See under J. W. Stather].
- 114 S[HEPPARD], T.—In Memoriam, John Robert Mortimer. [Brief reference to his Geological work]. *Naturalist*, Sept., pp. 329-330.
- 115 ——— In Memoriam, Rev. E. Maule Cole, M.A., F.G.S. (1833-1911). *Naturalist*, April, p. 175. Photo in May, p. 178.
- 116 ——— Yorkshire Naturalists' at Harewood Park [includes note by S. Margerison on large glacial erratic]. *Naturalist*, June, pp. 233-236.
- 117 ——— Prominent Yorkshire Workers. V. John Robert Mortimer. [Refers to Geological Work in East Yorkshire, with list of papers thereon]. *Naturalist*, May, pp. 186-191.
- 118 ——— Yorkshire Naturalists on the Cleveland Hills. [Brief Geological notes]. *Naturalist*, July, pp. 249-250.
- 119 SHERLOCK, ROBERT LIONEL.—The Relationship of the Permian to the Trias in Nottinghamshire. [Refers to Yorkshire, etc.]. *Quart. Journ. Geol. Soc.*, vol. lxvii., pt. 1, Feb., pp. 75. Abstract in *Nature*, Jan. 12th, pp. 360-361; *Geol. Mag.*, Feb., pp. 91-92.

- 120 SMITH, STANLEY.—The Faunal Succession of the Upper Bernician. [Brief references to Yorkshire]. *Trans. Nat. Hist. Soc., Northumberland, Durham and Newcastle-upon-Tyne*, n. s., vol. iii., pt. 3, pp. 591-645.
- 121 SMYTHE, —.—[See A. R. Dwerryhouse].
- 122 SPENCER, L. J.—[See Reinhard Brauns].
- 123 SPENCER, LEONARD J.—The World's Minerals. *London*. pp. x.+212.
- 124 STANSFIELD, W. H.—'The Ice-Age in Britain.' [Presidential Address ; discusses the evidences in the North of England]. *14th Rep. Southport Soc. of Nat. Sci.*, 1908-10, pp. 6-13.
- 125 STATHER, A. J.—Geological Photographs Committee, [report of ; in the Yorkshire Naturalists' Union Report for 1910.] *Naturalist*, pp. 64-65.
- 126 STATHER, J. W.—Yorkshire Glacial Committee [in the Yorkshire Naturalists' Union Report for 1910 ; includes records by T. Sheppard and J. W. Stather]. *Naturalist*, Jan., pp. 65-66.
- 127 ——— Yorkshire Coast Erosion Committee [in Report of the Yorkshire Naturalists' Union for 1910 ; includes reports by J. J. Burton and J. W. Stather]. *Naturalist*, Jan., pp. 66-67.
- 128 ——— *Actinocamax quadratus* in the Chalk of Yorkshire. *Naturalist*, April, p. 152.
- 129 STATHER, [J. W.].—[See A. R. Dwerryhouse].
- 130 STEAD, J. E.—[See Anon.].
- 131 TANSLEY, A. G. [edited by].—Types of British Vegetation. [Refers to peat beds, etc.]. *Cambridge*. Pp. 416.
- 132 TAYLOR, JOHN W.—Monograph of the Land and Fresh-water Mollusca of the British Isles. Part 18 [includes maps shewing the 'Geological distribution of *Helix nemoralis* in Yorkshire (Mid. W., S.W. and S.E.), and *H. hortensis* in Yorkshire (Mid. W.). Pp. 305-368 and 5 plates. June.
- 133 THOMAS, H. HAMSHAW.—Recent Researches on the Jurrassic Plants of East Yorkshire. *Brit. Assoc. Leaflet*, pp. 1. (With slight additions and alterations) in *Naturalist*, Dec., pp. 409-410.

- 134 THOMAS, H. HAMSHAW.—On the Leaves of Calamites (*Calamocladus* section). [Specimens from the Halifax Hard Bed]. *Phil. Trans. Roy. Soc. of London*, series B., vol. ccii., pp. 51-92.
- 135 — On the Spores of some Jurassic Ferns. [In the estuarine shales of the Yorkshire Coast; of the spores and sporangia of *Coniopteris hymenophylloides* and *Todites Williamsoni*]. *Proc. Camb. Phil. Soc.*, vol. xvi., pt. 4, 1911, pp. 384-388. Abstract in *Nature*, June 1st, p. 472; *Naturalist*, p. 347, and *Knowledge* p. 439.
- 136 THOMPSON, C.—[See A. R. Dwerryhouse].
- 137 TRAQUAIR, RAMSAY H.—The Ganoid Fishes of the British Carboniferous Formations, part 1, No. 5, Palæoniscidæ. [Describes *Cycloptychius carbonarius*, *Rhadinichthys monensis*, *R. macrodon*, *R. hancocki* and *R. planti* from Yorkshire]. *Monogr. Palæont. Soc.* for 1910, pp. 123-158; plates xxxi.-xxxv.
- 138 VILLY, FRANCIS.—On the Ancient Slag-Heaps on Rumbolds Moor. [Considered to bear evidence of mining 'within about 200 years of the year 1400']. *Bradford Antiquary*, n. s., pt. xv., pp. 433-435.
- 139 WARE, A. HIBBERT.—Geology (Microscopical), [report on; references to examination of chalk from Flamborough and Driffeld]. *Ann. Rep. Scarborough Phil. and Arch. Soc.* for 1910, p. 30.
- 140 WATNEY, (MISS) G. R. and (MISS) E. G. WALCH.—The Graptolitic Zones of the Salopian Rocks of the Cautley Area, near Sedbergh, Yorkshire. *Rep. Brit. Assoc.* (Sheffield), 1910, p. 603. Abstract in *Geol. Mag.*, Feb., pp. 92-93.
- 141 WATSON, JOHN.—British and Foreign Building Stones. A Descriptive Catalogue of the specimens in the Sedgwick Museum, Cambridge. *Cambridge*. Pp. vi.+483.
- 142 WATTS, W. W. and S. H. REYNOLDS (Secretaries).—Photographs of Geological Interest. Seventeenth Report of the Committee [includes particulars of numerous additions of Yorkshire photographs by Godfrey Bingley]. *Rep. Brit. Assoc.* (Sheffield), 1910, pp. 142-159.
- 143 — WATTS. W. W.—The Anniversary Address of the

- President : 'Geology as Geographical Evolution.' *Quart. Journ. Geol. Soc.*, vol. lxvii, pt. 2, May, pp. lxii-xciii.
- 144 WEISS, F. E.—Address to the Botanical Section [of the British Association ; refers to work amongst the plants of the Coal-Measures in Yorkshire and Lancashire], pp. 1-13 ; also in *Nature*, Sept. 21st, pp. 395-401. Abstract in *Lanc. Nat.*, Sept., pp. 180-182.
- 145 WELCH, (MISS) E. G.—[See (Miss) G. R. Watney].
- 146 WEYMAN, G.—[See A. R. Dwerryhouse].
- 147 WILSON, ALFRED P.—Yorkshire Moors and Dales. A Description of the Moors of North-East Yorkshire. [Brief Geological notes]. *London*. Pp. 236.
- 148 WILSON, J. E.—The Sugden End Overflow Valley. *Bradford Sci. Journ.*, April, pp. 124-126.
- 149 WINTER, W. P.—Shipley Glen. An explanatory Outline of its Physical Features for the interested lover of our country. Part III. *Bradford Sci. Journ.*, Jan., pp. 65-71.
- 150 ——— Shipley Glen. An explanatory Outline of its Physical Features for the interested lover of our county. Reprinted from *The Bradford Sci. Journ.* Pp. 28.
- 151 WOODS, HENRY.—A Monograph of the Cretaceous Lamelli-branchiata of England. Vol. ii., pt. 7. *Inoceramus*, [Describes *Inoceramus*, sp., *I. sulcatus*, *I. tenuis* from Speeton, *I. labiatus* from the 'Yorkshire Coast']. *Monogr. Palæont. Soc.* for 1910, pp. 261-284, plates xlv.-l.
- 152 WOODWARD, ARTHUR SMITH.—The Fossil Fishes of the English Chalk. Part VI. [Describes *Corax falcatus*, *Oxyrhina mantelli*, *Lamna appendiculata*, as of universal distribution]. *Monogr. Palæont. Soc.* for 1910, pp. 185-224, plates xxxix,-xlvi.
- 153 ——— The Fauna of the Carboniferous Period, so far as it has been discovered in the same deposits as the Carboniferous Flora. Abstract in *Nature*, June 15th, p. 541.
- 154 WOODWARD, HORACE B.—History of Geology. *London*. Pp. 154.
- 155 WOOLACOTT, D.—[See A. R. Dwerryhouse].



- 156 WRIGHT, G. FREDERICK.—The Ice Age in North America and its bearings upon the Antiquity of Man. [Contains a chapter dealing with the glaciology of England, particularly the Northern Counties]. Fifth Edition. *Oberlin, Ohio*. Pp. xxii.+763.
- 157 WRIGHT, W. B.—On a Pre-Glacial Shore line in the Western Isles of Scotland. [Compares with the Sewerby deposit]. *Geol. Mag.*, March, pp. 97-109.
- 158 WRIGLEY, AMMON.—Saddleworth: Its Pre-historic remains. [Geological notes]. *Oldham*, Pp. 77.

## 1912.

- 1 ANON.—[Announcement of the gift by Dr. W. E. Garforth of specimens showing the structure of coal seams in Yorkshire, Lancashire, etc.]. *Nature*, Oct. 3rd, p. 138.
- 2 ——— An Interesting Yorkshire Calamite; Snakestones. *Naturalist*, Dec., pp. 358-360.
- 3 ——— Ankerite in Coal. *Naturalist*, July, p. 202.
- 4 ——— Metallurgy and Engineering. [Notice of Professor Louis' Paper]. *Naturalist*, Jan., p. 3.
- 5 ——— North of England Geology. [Notice of papers by Messrs. Harker and Sheppard] in *Naturalist*. *Geol. Mag.*, Nov., p. 524.
- 6 ——— Fossil Chalk Inocerami. [Figures *Inoceramus lobatus* from Yorkshire]. *Naturalist*, May, p. 137.
- 7 ——— Selby. [Note of the fact that the whole of the interior of the new south transept of Selby Abbey has been carried out in Tadcaster stone]. *Quarry*, Nov., p. 340.
- 8 ——— Leaves of Calamites. [Notice of Mr. H. H. Thomas's paper]. *Naturalist*, Jan., pp. 4-5.
- 9 ——— (signed 'W.').—A Glacial Geologist's Yorkshire Notebook. [A summary of the Yorkshire section of Carvill Lewis' 'Papers and Notes on the Glacial Geology of Great Britain and Ireland']. *Bradford Sci. Journ.*, No. 8, vol. iii., pp. 257-262.
- 10 ——— Catalogue of the More Important Papers, especially those relating to Local Scientific Investigations, published by the Corresponding Societies [of the British

- Association] during the year ending May 31st, 1911. *Rep. Brit. Assoc.* (Portsmouth) for 1911, pp. 759-775.
- 11 ARBER, E. A. NEWELL.—The Fossil Flora of the Ingleton Coalfield (Yorkshire). *Geol. Mag.*, Feb., pp. 80-82.
  - 12 BACKHOUSE, JAMES.—Lead Mining [in Yorkshire]. *Victoria History of Yorkshire*, vol. ii., pp. 368-376.
  - 13 BATHIER, F. A.—Notes on *Hydreionocrinus* [figuring and describing specimens from the Carboniferous Limestone of Yorkshire]. *Trans. Edinburgh Geol. Soc.*, vol. x., pt. 1, pp. 61-76.
  - 14 BELINFANTE, L. L.—[See W. Rupert Jones].
  - 15 [BELINFANTE, L. L. : Edited by].—Abstracts of the Proceedings of the Geological Society of London. Session 1911-12, Nos. 913-928, pp. 110.
  - 16 [BINNEY, JAMES].—The Centenary of a Nineteenth Century Geologist, Edward William Binney, F.R.S., etc., etc. *Taunton*. Pp. 1-58.
  - 17 BONNEY, T. G.—The Work of Rain and Rivers. *Cambridge*. Pp. 144.
  - 18 BRAUNS, REINHARD, and L. J. Spencer.—The Mineral Kingdom. (Parts 17-25). Pp. 297-432, plates.
  - 19 BROWNE, A. J. JUKES.—[See A. J. Jukes-Browne].
  - 20 BROWNE, HORACE B.—The Story of the East Riding of Yorkshire. [Chapter on Geology]. *London*. Pp. 352.
  - 21 BUCKMAN, S. S.—Yorkshire Type Ammonites. Part VI. [with figures and descriptions of *Ammonites maculatus*, *heterogenes*, *integricostatus*, *siphuncularis*, *cereus*, *perarmatus* and *athleticus*]. (Descriptions Nos. 45-51, and 9 plates). Part VII. (Plates lii.-lx., and descriptions, Nos. 52-60, 1912), [figures of *Ammonites solitarius*, *A. trivialis*, *A. tenellus*, *A. flavus*, *A. limatus*, *A. andraei*, *A. crassulosus*, *A. fonticulus* and *A. crosbeyi*]. Part VIII., (pp. vii., viii. 9 plates and figures, appendix a-g, and table). [Describes *Ammonites puteolus*, *crassiusculosus*, *annuliferus*, *anguiformis*, *owenensis*, *simpsoni* and *denotatus*]. [See also *Naturalist*, April, p. 103].
  - 22 ——— Ammonites from the Scarborough Limestone [being appendix to Mr. L. Richardson's paper]. *Proc. Yorks. Geol. Soc.*, vol. xvii., pt. 3, published 1912, pp. 205-209.

- 23 BUCKMAN, S. S.—Comparison of the Upper Toarcian Beds in Yorkshire and the Cotteswold Hills. [Appendix to Mr. L. Richardson's paper]. *Proc. Yorks. Geol. Soc.*, vol. xvii., pt. 3, published 1912, pp. 209-212.
- 24 BURTON, J. J.—Coast Erosion [Committee of Yorkshire; report]. *Naturalist*, Jan., p. 28.
- 25 ——— Jurassic Flora Committee [of Yorkshire; report]. *Naturalist*, Jan., pp. 28-29.
- 26 BURTON, R. C.—[See M. K. Heslop].
- 27 CARTER, W. LOWER.—Geology at the British Association. [Refers to Mr. Gilligan's paper on the Millstone Grit]. *Nature*, Oct., 17th, pp. 207-212.
- 28 CASH, W.—The Lost Towns of the Yorkshire Coast [review of, with map]. *Naturalist*, Dec., pp. 380-382.
- 29 COHEN, J. B. and C. P. FINN.—Paraffins from a Yorkshire Coal Seam [at Hemsworth]. *Journ. Chem. Industry*, vol. xxxi., No. 1, Jan. 15th, pp. 12-15. [See also *Knowledge*, March, p. 110].
- 30 CROOK, T.—On the frequent Occurrence of Ankerite in Coal. *Min. Mag.*, vol. xvi., No. 75, May, pp. 219-223.
- 31 CROSSLAND, CHAS.—Contributions to Halifax Bibliography and Authors. Part IV. (Natural History) [includes Geology]. *Trans. Halifax Antiq. Soc.*, pp. 25-72.
- 32 CROWTHER, H.—General Guide to the Museum of the Leeds Philosophical and Literary Society. (5th edition).
- 33 CULPIN, H.—Fossil Flora and Fauna of the Carboniferous Rocks Committee [report]. *Naturalist*, Jan., p. 28.
- 34 ——— Geology [Askern District]. *Naturalist*, August, pp. 255-256.
- 35 ——— Geology [of the Riccall District]. *Naturalist*, June, p. 172.
- 36 DRAKE, H. C.—Report for Geology, 1911 [Scarborough District]. *Ann. Rep. Scarborough Phil. and Arch. Soc.* for 1911, pp. 30-31.
- 37 DWERRYHOUSE, A. R.—Erratic Blocks of the British Isles: Report of the Committee [includes reports by R. M. Robson [? V.] Milthers, T. Sheppard, etc.]. *Rep. Brit. Assoc.* (Portsmouth) for 1911, pp. 101-104.
- 38 ——— (Secretary).—Erratic Blocks of the British Isles. Report of the Committee [includes records by J. W.

- Stather]. *Brit. Assoc. Leaflet* (Dundee Meeting), pp. 1-3.
- 39 ECKEL, E. C.—Building Stones; their Origin, Characters and Examination. Pp. xv.+264. *London*.
- 40 ELGEE, FRANK.—The Moorlands of North Eastern Yorkshire. Their Natural History and Origin. [Many Geological notes]. *London*. pp. xvi.+361.
- 41 FINN, C. P.—[See J. B. Cohen].
- 42 FOOTE MINERAL COMPANY.—Meteorites. [Contains references to the Wold Cottage Meteorite]. *Philadelphia*. Pp. 64.
- 43 FORD, WILLIAM E.—Dana's Manual of Mineralogy. Thirteenth Edition. *London*. Pp. vi.+460.
- 44 GILLIGAN, ALBERT.—The Millstone Grit of Yorkshire; some new evidence as to its source of origin. *Naturalist*, Dec., pp. 362-363, and *Geol. Mag.*, Dec., pp. 561-562, and *Brit. Assoc. Leaflet* (Dundee). Pp. 1.
- 45 GRAY, J. W.—The Lower Severn Plain during the Glacial Period. [Refers to Yorkshire]. *Proc. Cotteswold Nat. Field Club*, vol. xvii., pt. 3, pp. 365-380.
- 46 GREGORY, J. W.—The Making of the Earth. *London*. Pp. viii.+250.
- 47 HARKER, ALFRED.—Some Aspects of Modern Petrology. [Presidential Address to Section C.]. *Rep. Brit. Assoc.* (Portsmouth) for 1911, pp. 370-381.
- 48 ——— Petrology in Yorkshire. [Presidential Address to the Yorkshire Naturalists' Union]. *Naturalist*, Feb., pp. 37-44, and March, pp. 69-73.
- 49 HATCH, F. H.—Mineralogy. Fourth Edition. [Includes particulars of several northern specimens]. Pp. x.-253.
- 50 HAWKESWORTH, EDWIN.—Geology [of Tebay District]. *Naturalist*, Sept., pp. 275-6.
- 51 ——— A Pre-Glacial Lake-Bed, near Northallerton. *Naturalist*, July, pp. 204-5.
- 52 HESLOP, MARY K.—A Preliminary Note on the Unaxial Augites of the North of England Igneous Rocks. [Cleveland Dyke]. *Proc. Univ. Durham Phil. Soc.*, vol. iv., pt. 3, pp. 172-4.

- 53 HESLOP, M. K. and R. C. BURTON.—The Tachylite of the Cleveland Dyke. *Geol. Mag.*, Feb., pp. 60-69.
- 54 HEWITT, W.—President's Address, The Coast in its Geological Relations. *Proc. Liverpool Geol. Soc.*, pt. 3, vol. xi., pp. 153-182.
- 55 HILL, WILLIAM.—Rocks containing Radiolaria. [Brief references to specimens in Yorkshire Chalk]. *Proc. Geol. Assoc.*, vol. xxiii., pt. 2, pp. 62-91.
- 56 HOLMES, J.—*Halysites catenularia* at Cragg Hill, Yorkshire. [Recorded in the Coniston Limestone Series]. *Naturalist*, Feb., p. 57.
- 57 J[OHNS], C.—Annual Report for 1911 [of the Yorkshire Geological Society; summary of work on excursions, etc.]. *Proc. Yorks. Geol. Soc.*, vol. xvii., pt. 3, 1911, pp. 261-263.
- 58 JOHNSTONE, MARY A.—On *Calamites* (*Calamitina*) *varians*, Sternb., var. *insignis*, Weiss [from the Bradford Coal-Measures]. *Mem. and Proc. Manchester Lit. and Phil. Soc.*, vol. lvi., pt. 3, No. 17, pp. 1-16.
- 59 JONES, W. RUPERT, compiled by, [Edited by L. L. BELINFANTE]. Geological Literature added to the Geological Society's Library during the year ended December 31st, 1911. *London*. Pp. 164.
- 60 JUKES-BROWNE, A. J.—On the Recognition of Two Stages in the Upper Chalk. *Geol. Mag.*, July, pp. 304-313; August, pp. 360-372.
- 61 ——— The Student's Handbook of Stratigraphical Geology. Second Edition. *London*. Pp. xiv.+668.
- 62 KENDALL, HUGH P. and H. LING ROTH.—Local Prehistoric Implements [with brief Geological notes]. *Bankfield Museum Notes*, No. 12, Pp. 20.
- 63 KENDALL, PERCY FRY.—Address by the President [on the progress of Yorkshire Geology during the preceding half century]. *Proc. Yorks. Geol. Soc.*, vol. xvii., pt. 3, 1911, pp. 169-183.
- 64 KENDALL, P. F.—Excursion to the Dales of West Yorkshire and Harrogate, July 27th to August 6th (Long Excursion), 1910. *Proc. Geol. Assoc.*, vol. xxiii., pt. 2, pp. 125-136.

- 65 LAMPLUGH, G. W.—In Memoriam, John Robert Mortimer. *Proc. Yorks. Geol. Soc.*, vol. xvii., pt. 3, 1911, pp. 258-260.
- 66 ——— On the Shelly Moraine of the Sefström Glacier and other Spitsbergen phenomena illustrative of British Glacial conditions. [References to East Yorkshire Glacial Deposits]. *Proc. Yorks. Geol. Soc.*, vol. xvii., pt. 3, 1911, pp. 216-241.
- 67 LEACH, WALTER.—The Soft Waters of the Bradford District. *Bradford Sci. Journ.*, No. 8, vol. iii., pp. 262-264.
- 68 LEE, G. W.—The British Carboniferous Trepotomata [describes and figures *Tabulipora multitabulata* sp. nov. from Settle; *T. debilis*, sp. nov., from Cracoe, etc.]. *Mem. Geol. Survey: Palæontology*. 4to. Vol. 1, pt. 3, pp. 135-195. Pl. xiv.-xvi.
- 69 LOMAS, J. [the late].—Life History of a Mountain. *Nature Book, London*. Part viii., pp. 242-8; pt. xi., pp. 332-338.
- 70 LOMAX, JAMES.—The Microscopical Examination of Coal and its use in determining the inflammable Constituents present therein. (Discussion upon, by various gentlemen). *Trans. North England Inst. and Mech. Engineers*, vol. lxii, pt. 3, March, pp. 99-102; also pt. 5, May, pp. 123-131, and *Trans. Manchester Geol. and Min. Soc.*, vol. xxxii., pts. xvii. and xviii., pp. 344-347. [See also *Naturalist*, Feb., p. 34].
- 71 ——— Natural History of Coal and Coal-Dust. [Describes the Garforth Collection, now in the Leeds University] *Trans. Manchester Geol. and Min. Soc.*, vol. 32, pts. 20 and 21, pp. 351-355.
- 72 MATTHEWS, ERNEST R.—Coast Erosion and Protection. No. 1. *Engineering*, Aug. 30th, pp. 282-283. No. 2, *loc. cit.*, Sept. 20th, pp. 380-382.
- 73 MITCHELL, C. AINSWORTH.—Paraffin Oil from a Yorkshire Coal Seam. [Notice of paper by Messrs. Cohen and Finn]. *Knowledge*, March, p. 110.
- 74 PARIS, E. TALBOT.—Notes on some Yorkshire Echinoids. [Appendix to L. Richardson's paper]. *Proc. Yorks. Geol. Soc.*, vol. xvii., pt. 3, 1911, pp. 213-215.
- 75 PERKIN, HERBERT.—Modern Mining [in Yorkshire]. Coal Mining, Ironstone Mining. *Victoria History of Yorkshire*, vol. ii., 355-368.

- 76 [PICKERING, —.].—Quarry Inspectors' Reports, 1911. Mr. Pickering's Report on the Yorkshire and North Midland District. *Quarry*, Dec., pp. 357-359.
- 77 RAVN, J. P. J.—Notes on the Cretaceous Fossils in the East Yorkshire Drift. *Naturalist*, Jan. p. 8.
- 78 REED, F. R. COWPER.—Notes on the Genus *Trinucleus*. [Refers to specimens from Norber]. *Geol. Mag.*, August, pp. 346-353. Pt. ii., *Geol. Mag.*, Sept., pp. 385-394.
- 79 REID, CLEMENT.—Joint Discussion with Sections C and E on the Relation of the present Plant Population of the British Isles to the Glacial Period [with discussion by various naturalists]. *Rep. Brit. Assoc. for 1911* (Portsmouth), pp. 573-580.
- 80 REYNOLDS, SIDNEY H.—A Monograph of the British Pleistocene Mammalia, vol. ii., pt. 4, The Mustelidæ. [Refers to specimens from Kirkdale, etc.]. *Monogr. Palæont. Soc.* for 1911, vol. lxx. [See also *Naturalist*, May, p. 136].
- 81 RICHARDSON, LINSALL.—The Lower Oolitic Rocks of Yorkshire [with appendices by S. S. Buckman and E. Talbot Paris]. *Proc. Yorks. Geol. Soc.*, vol. xvii., pt. 3, 1911, pp. 184-212.
- 82 ROBINSON, J. FRASER.—Nature in Hull and District. [Brief Geological notes]. In *Souvenir of the Hull Conference*, 1912, of the National Union of Teachers, pp. 35-38.
- 83 ROBSON, R. M.—[See A. R. Derryhouse].
- 84 ROTH, H. LING.—[See Hugh P. Kendall].
- 85 SCOTT, DUKINFIELD H.—The Work of Sir Joseph Hooker on Fossil Plants. [Presidential Address to the Linnean Society]. *Journ. Linn. Soc.*, Pp. 16.
- 86 SEARLE, ALFRED B.—An Introduction to British Clays, Shales, and Sands. *London*. Pp. xii.+451.
- 87 ——— The Natural History of Clay. *Cambridge*. Pp. viii.+176.
- 88 SELLERS, MAUD.—Alum. Salt [Quarrying in Yorkshire]. *Victoria History of Yorkshire*, vol. ii., pp. 381-387.
- 89 SHEPPARD, GEORGE.—Some Recent Discoveries in the Chalk of the Flamborough District. *Naturalist*, Nov., pp. 337-338.
- 90 SHEPPARD, THOMAS.—The Lost Towns of the Yorkshire

- Coast and other chapters bearing upon the geography of the District. [Several chapters on Coast Erosion, Geological features, etc.]. *London*. Pp. xviii. and 329.
- 91 SHEPPARD, THOMAS.—Yorkshire Past and Present. Historical, Pictorial and Descriptive Guide. [Contains Geological notes]. *London*. Foolsap. Pp. 1-252.
- 92 ——— Illustrated Guide to the Museum of Fisheries and Shipping. [Includes particulars of fish remains from the Chalk and Lias]. *Hull*. Pp. 48.
- 93 SHEPPARD, T.—Some Glimpses of Old Hull in the light of Recent Excavations. [Brief Geological notes]. *Trans. Hull Sci. and Field Nat. Club*, vol. iv., pt. 4, pp. 187-204, plates.
- 94 ——— A Yorkshire Plan by William Smith [reproduced]. *Naturalist*, Sept., pp. 282-3.
- 95 ——— The Evolution of Bridlington. *Naturalist*, Sept., pp. 270-273.
- 96 ——— Coast Changes at Hornsea [from the middle ages ; with particulars of erosion]. *Naturalist*, April, pp. 114-120.
- 97 ——— [See A. R. Dwerryhouse].  
S[HEPPARD], T.—In Memoriam, Thomas Newbitt, F.G.S., 1846-1912. [Refers to his Geological work]. *Naturalist*, July, pp. 224-5.
- 98 ——— In Memoriam, The Rev. E. Maule Cole, M.A., F.G.S. [with list of papers]. *Proc. Yorks. Geol. Soc.*, vol xvii., pt. 3, 1911, pp. 256-257.
- 99 SKEAT, WALTER W.—‘Snakestones’ and Stone Thunderbolts as subjects for systematic investigation. *Folklore*, vol. xxiii., No. 1, March, pp. 45-80.
- 100 SMITH, G. F. HERBERT.—Gem-Stones and their Distinctive Characters. *London*. Pp. xiv.+312.
- 101 SMITH, STANLEY.—Report of the Committee appointed to report upon the Carboniferous Limestone Formation of the North of England, with special reference to its Coal-resources. [With maps, etc.]. *North of England Inst. Min. and Mech. Engineers*. *Newcastle*. Pp. x.+231.
- 102 SPENCER, L. J.—[See Reinhard Brauns].
- 103 STATHER, A. J.—Geological Photographs Committee [of Yorkshire ; report]. *Naturalist*, Jan., p. 27.



- 104 STATHER, J. W.—Glacial Committee [of Yorkshire; Report]. *Naturalist*, Jan., pp. 27-28.
- 105 ——— [See A. R. Derryhouse].
- 106 STATHER, JOHN WALKER.—Shelly Clay Dredged from the Dogger Bank. *Quart. Journ. Geol. Soc.*, vol. lxxviii., pt. 3, No. 271, pp. 324-327.
- 107 STATHER, J. W.—Notes on the Belemnites of the Yorkshire Chalk. *Proc. Yorks. Geol. and Polyt. Soc.*, vol. xvii., pt. 3, 1911, pp. 246-250.
- 108 [STRACHAN, JAMES].—Beekite or Cycloidal Chalcedony. [Refers to 'silicified boreholes' in the Yorkshire Oolites]. *Ann. Rep. and Proc. Belfast Nat. Field Club*, vol. vi., pt. 5, 1911-12, pp. 536-547.
- 109 THOMAS, H. HAMSHAW.—Recent Researches on the Jurassic Plants of Yorkshire. *Rep. Brit. Assoc. (Portsmouth)*, for 1911, pp. 569-570.
- 110 THOMAS, H. H.—*Stachypteris Hallei*, a new Jurassic Fern [from the Estuarine Beds of Whitby and Marske]. Abstract in *Nature*, July 4th, p. 467.
- 111 VAUGHAN, ARTHUR.—Note on *Clisiophyllum ingletonense*, sp. nov. [from the Carboniferous Basement Beds, Ingleton]. *Proc. Yorks. Geol. Soc.*, vol. xvii., pt. 3, 1911, pp. 251-255.
- 112 VELLACOTT, C. H.—Mining and Smelting (Mediæval) Coal, Iron, Lead, Copper [in Yorkshire]. *Victoria History of Yorkshire*, vol. ii., pp. 338-355.
- 113 ——— Quarrying [in Yorkshire]. *Victoria History of Yorkshire*, vol. ii., pp. 376-381.
- 114 WEISS, F. E.—Presidential Address, 1912. The Microscopical Study of Fossil Plants. *Ann. Rep. and Trans. Manchester Micro. Soc.*, 1911, pp. 34-42.
- 115 WILMORE, ALBERT.—Some Geographical Problems of the Mid-Pennines. [Refers to the faults, former river channels, etc.]. *Journ. Manchester Geog. Soc.*, vol. xxvii., pt. 2, 1911, pp. 33-38.
- 116 ——— Note on the Zones of the Carboniferous Limestone South of the Craven Fault. *Proc. Yorks. Geol. Soc.*, vol. xvii., pt. 3, 1911, pp. 242-245.
- 117 WILSON, ALBERT.—Sea Spray carried Inland. *Bradford Scientific Journ.*, No. 8, vol. iii., pp. 242-247.

- 118 WILSON, J. E.—The Sources of the River Aire. *Bradford Sci. Journ.*, No. 8, vol. iii., pp. 225-231.
- 119 WOODHEAD, T. W.—Geology [report on ; in the Huddersfield District]. *Ann. Rep. Huddersfield Nat. etc., Soc.* for 1911-12, pp. [12-13] (no pagination).
- 120 WOODS, HENRY.—A Monograph of the Cretaceous Lamelibranchiata of England. Vol. ii., pt. 8, Inoceramus, pp. 285-340 plates. [Refers to numerous Yorkshire examples]. *Monogr. Palæont. Soc.* for 1911, vol. lxx. [See also *Naturalist*, May, pp. 201-204].

## 1913.

- 1 ANON.—Per Rail. [Plans and Sections of Coal-fields, etc.]. *London*. Pp. 238.
- 2 ——— An old plan of Hornsea Mere. A Spring of 'Victriolic [sic.] Quality.' *Naturalist*, Feb., p. 89.
- 3 ——— The Coal Resources of the World. An enquiry made upon the initiative of the Executive Committee of the Twelfth International Geological Congress, Canada, 1913, with the assistance of Geological Surveys and Mining Geologists of different countries. 3 vols. Sm. 4to. About 400 pp. each. Includes 'The Coal Resources of Great Britain,' by A. STRACHAN, in vol. ii., pp. 597-628., and atlas of 66 maps in colours (No. 29 is of England and Wales by A. STRACHAN), 13½ x 19½ inches.
- 4 ——— A Catalogue of the Hull Geological Society's Library and of the Geological Works in the Central Public Library, Albion Street, Hull. *Trans. Hull Geol. Soc.*, vol vi., pt. 3, pp. 173-222.
- 5 ——— The Concealed Coalfields of Yorkshire and Nottingham [notice of]. *Naturalist*, July, p. 246.
- 6 ——— Fossil Flora of Cleveland. Recent Discoveries. Derived cephalopoda of the Holderness Drift from the North Sea Bed [notices of papers read to the Geological Society]. *Naturalist*, March, pp. 123-4.
- 7 ——— Interesting Discovery: Mountain Limestone at Huddersfield. *New Nature Study*, No. 5, N.S., Feb., pp. 11-12.
- 8 ——— Science and Magic. Water Divining. An Artesian Well, Geological Structure. Fossil Beads. The Kelloways Rock of Scarborough and its Ammonites. The name Kellaways. *Naturalist*, April, pp. 153-160.

- 9 ANON.—The Beginnings of Geology : Fossil Men ; a Crocodile and a Horse ; Snakestones of two species ; Internal Structure ; Sports of Nature ; No change since Creation ; ' A chimera.' *Naturalist*, May, pp. 181-184.
- 10 — The Palæozoic Rocks of Cautley. *Naturalist*, Jan., p. 6.
- 11 — A large Shap Boulder [at Whorlton-in-Cleveland]. *Naturalist*, Jan., p. 1.
- 12 — The Structure of Coal. *Naturalist*, Jan., p. 1.
- 13 — The Interglacial Problem [notice of paper by G. W. LAMPLUGH]. *Naturalist*, Nov., pp. 380-381.
- 14 — Ammonites braikenridgii [with figure]. *Naturalist* Dec., pp. 409-410.
- 15 — The Lost Towns of the Yorkshire Coast by T. SHEPARD [notice of]. *Geol. Mag.*, March, pp. 126-127.
- 16 — Catalogue of the More Important Papers, especially those relating to Local Scientific Investigations, published by the Corresponding Societies [of the British Association] during the year ending May 31st, 1912. *Rep. Brit. Assoc.* (Dundee) for 1912, pp. 778-794.
- 17 ARNOLD, J. O.—Recent Advances in Scientific Steel Metallurgy [refers to Yorkshire ; address delivered at the Royal Institution]. *Nature*, March 13th, pp. 45-49, and March 20th, pp. 70-72.
- 18 ASHWORTH, J. H. (re-issued by).—A View of the Petrifying Spring, commonly called Dropping Well [etc.] at Knaresborough. Reproduction in colours of the Gracious and Charming Engraving of this Famous Spot. Engraved by F. Vivares after Thomas Smith, and published by JOHN BOWLES, at No. 13 Cornhill, London, circa 1780. Re-issued by J. H. ASHWORTH, Knaresborough.
- 19 AVEBURY [late LORD].—Prehistoric Times as illustrated by Ancient Remains and the manners and customs of modern savages. Ed. 7. *London*. Pp. 1-623.
- 20 BATHER, F. A.—The Fossil Crinoids referred to *Hypocrinus* Beyrich [describes a specimen from the Carboniferous of Nidderdale]. *Proc. Zool. Soc.*, pp. 894-913.
- 21 — British Fossil Crinoids. IX. *Cydonocrinus parvulus* n.g., et sp., Yoredale Beds [Nidderdale], Yorkshire. *Ann. and Mag. Nat. Hist.*, vol. xii., No. 70, Oct., pp. 388-394.

- 22 [BELINFANTE, L. L., edited by].—Abstracts of the Proceedings of the Geological Society of London. Session 1912-13, Nos. 929-945. *London*. Pp. 123.
- 23 BEVAN, D. W.—Report on Geology [records one or two local 'finds']. *Ann Report Scarborough Phil. and Arch. Soc.*, for 1912, pp. 31-32.
- 24 BRADSHAW, C.—Geology [of Roche Abbey]. *Naturalist*, May, pp. 209-210.
- 25 BROCKBANK, J. L.—Oxford County Histories. The East Riding of Yorkshire [geological notes]. *Oxford*. Pp. 256.
- 26 BRODRICK, HAROLD.—The Stream-bed of Fell Beck above Gaping Ghyll [Ingleborough, with plan]. *Yorks. Ramblers' Club Journal*, vol. iv., No. 12, pp. 44-53.
- 27 BRYDONE, R. M.—The Proposed Recognition of two Stages in the Upper Chalk. *Geol. Mag.*, Feb., pp. 56-62.
- 28 ——— The Division of the Upper Chalk [letter thereon]. *Geol. Mag.*, August, pp. 380-381.
- 29 BUCKMAN, S. S.—Yorkshire Type Ammonites. Part 9, 1913, pp. v.-x., i.-iv., 10 plates [describing *A. vermis*, *joveatus*, *gubernator*, *subtriangularis*, *aculeatus*, *luridis*, and *nitescens* from the Lias]. Part 10, pp. v.-vi., 19 plates, and descriptions Nos. 75-83 [figures and descriptions of *A. transformatus*, *defossus*, *regularis*, *gagateus*, *lutescens*, *pinguis*, *braikenridgii*, *retusus*, and *validis*. *London*, 1913. See also *Naturalist*, December, pp. 409-410. Part 11, 1913, pp. vii.+viii., and description Nos. 84-90, [describing *A. natus*, *phillipsi*, *nitidus*, *fasciatus*, *peregrinus*, *crassoides*, *vorticellus*].
- 30 ——— The 'Kelloway Rock' of Scarborough. *Quart. Journ. Geol. Soc.*, vol. lxi., pt. 2, No. 274, June, pp. 152-168. Abstract in *Geol. Mag.*, May, pp. 231-232; *Nature*, March 27th, p. 101; also *Naturalist*, April, pp. 159-160.
- 31 BURTON, J. J.—The Cleveland Ironstone. *Naturalist*, April, pp. 161-168; May, pp. 185-194.
- 32 ——— Coast Erosion Committee [Report of]. *Ibid.*, Jan., p. 86.
- 33 ——— Jurassic Flora Committee [report of]. *Ibid.*, Jan., p. 86.

- 34 BURTON, J. J.—Geology [of Kirkby Stephen district]. *Naturalist*, June, pp. 235-237.
- 35 ——— Geological Notes on Great Ayton. *Ibid.*, Oct., pp. 368-370.
- 36 CARRUTHERS, R. G.—*Lophophyllum* and *Cyathaxonina*: Revision Notes on two genera of Carboniferous Corals. *Geol. Mag.*, Feb., pp. 49-56.
- 37 CARTER, W. LOWER.—Geology at the British Association. *Naturalist*, Nov., pp. 385-389.
- 38 CHATWIN, CHARLES P.—The Cretaceous Lamellibranchia of Yorkshire. *Ibid.*, May, pp. 201-204.
- 39 COOPER, A. N.—East Yorkshire: A Historical Guide for young and old [brief geological notes]. *Scarborough*. Pp. 91.
- 40 DWERRYHOUSE, A. R.—Erratic Blocks of the British Isles [includes reports by J. W. STATHER and T. SHEPPARD]. *Rep. Brit. Assoc.* (Dundee) for 1912, pp. 132-135.
- 41 ——— Erratic Blocks of the British Isles. Report of the Committee [includes Yorkshire item. See under Sheppard]. *Brit. Assoc.* 'Folder,' pp. 1-5.
- 42 EASTMAN, CHARLES R.—[See Karl A. von Zittel].
- 43 ELGEE, FRANK.—Henry Simpson [obituary notice; refers to his geological work]. *Proc. Cleveland Nat. Field Club*, vol. iii., pt. 1, 1910-1911, pp. 8-10.
- 44 ——— The Moorlands of North East Yorkshire [notice of]. *Geol. Mag.*, March, pp. 124-126.
- 45 ——— Secretary's Reports [contains brief geological notes]. *Proc. Cleveland Nat. Field Club* for 1910-1911, pp. 65-83.
- 46 ELLES, GERTRUDE L., and WOOD, ETHEL M. R. [Mrs. Shakespear] (Edited by Charles Lapworth).—A Monograph of British Graptolites, pt. 9, pp. 415-486; plates xlii.-xlix. *Mon. Palæontographical Society* for 1912. [Describes numerous species of Monograptus from Yorkshire and the Lake District].
- 47 FOWLER, J. C.—[See (late) J. HAWELL].
- 48 GARWOOD, E. J.—Address to the Geological Section [of the British Association]; deals with the Calcareous Algæ found in rocks]. *Brit. Assoc.* 'Folder' pp. 1-19. See also *Geol. Mag.*, Oct., pp. 440-446; Nov., pp. 490-498;

- Dec., pp. 545-553; abstract in *Naturalist*, Oct., pp. 343-344; and *Nature*, Sept., pp. 111-121.
- 49 GARWOOD, E. J.—The Lower Carboniferous Succession in the North-West of England [with appendices by A. SMITH WOODWARD and MADELINE MUNRO]. *Quart. Journ. Geol. Soc.*, vol. lxxviii., pt. 4, No. 272 for Dec., 1912 (issued Jan., 1913), pp. 449-586.
- 50 GIBSON, WALCOT.—The Concealed Coalfield of Yorkshire and Nottinghamshire. *Geol. Survey Memoir*, pp. vi.+122. See also *Geol. Mag.*, Aug., pp. 373-4; and *Naturalist*, July, p. 246.
- 51 GILLIGAN, ALBERT.—The Millstone Grit of Yorkshire: Some New Evidence as to its Source of Origin. *Rep. Brit. Assoc.* (Dundee), 1912, pp. 469-470.
- 52 HALLE, T. G.—On Upright *Equisetites* Stems in the Oolitic Sandstone in Yorkshire. *Geol. Mag.*, Jan., pp. 3-7.
- 53 ——— The Mesozoic Flora of Graham Island (refers to East Yorkshire specimens) *Wiss. Ergebnisse der Schwedischn Südpolar-Expedition*, 1901-1903. Bd. 111, Lief 14. *Stockholm*. [See also under A. C. Seward].
- 54 HARGREAVES, J. A.—Fossil Footprints near Scarborough [from the Oolites]. *Naturalist*, Feb., pp. 92-95.
- 55 HATCH, F. H. and R. H. RASTALL.—The Petrology of the Sedimentary Rocks. *London*. Pp. xvi.+425.
- 56 HAWELL, J. (late), J. C. FOWLER, and P. HUNTINGTON.—Notes of a Series of Borings made March 18th, and April 18th, 1902, at West House, Kildale. *Proc. Cleveland Nat. Field Club*, 1910-1911, pp. 32-33.
- 57 HILL, C. A.—Gaping Ghyll. *Brit. Assoc. Leaflet*, 1913, 1 p. Also see *Naturalist*, Oct., p. 347.
- 58 HOLMES, JOHN.—Geological Section [of the Yorks. Naturalists' Union, report of]. *Naturalist*, Jan., p. 86.
- 59 HOUSTON, A. C.—Studies in Water Supply. *London*. Pp. xii.+203.
- 60 HUNTINGTON, P.—[See (late) J. Hawell].
- 61 IDDINGS, JOSEPH P.—Igneous Rocks: Composition, Texture and Classification, Description and Occurrence, vol. xi. *New York*. Pp. i.-xi.+685.
- 62 JOHNSON, J. W. HAIGH.—The Composition of Peat, and Ecological Methods. *Naturalist*, April, pp. 169-171.

- 63 JUKES-BROWNE, A. J.—The Division of the Upper Chalk. *Geol. Mag.*, April, pp. 163-167, also letter on; in *Geol. Mag.*, Sept., pp. 431-432.
- 64 KENDALL, PERCY FRY.—Notes on the Stratigraphical Position of Beds with Equisetum. *Geol. Mag.*, pp. 7-9.
- 65 LAMPLUGH, G. W.—The Interglacial Problem in the British Islands. Congrès Géologique International. Douzième Session. Canada. Pp. 8. Noticed in *Naturalist*, Nov., pp. 380-381.
- 66 LANE, GEORGE JOHN.—[See Hugh Hamshaw Thomas].
- 67 LANG, W. D.—Report of a Visit to the Exhibits of Polyzoa and Corals in the Geological Department of the British Museum (Natural History) [brief references to Yorkshire Oolites]. *Proc. Geol. Assoc.*, vol. xxiv., pt. 3, May, pp. 169-173.
- 68 LAPWORTH, CHARLES.—[See Gertrude L. Elles].
- 69 MACTURK, G. W. B.—The Elephant Trench at Dewlish [refers to cloudbursts in East Yorks.] *Nature*, Oct. 9th, p. 166.
- 70 MARR, JOHN EDWARD.—The Lower Palæozoic Rocks of the Cautley District (Yorkshire). *Quart. Journ. Geol. Soc.*, vol. lxi., pt. 1, pp. 1-18. Abstract in *Naturalist*, Jan., p. 6, and *Geol. Mag.*, Jan., pp. 41-42.
- 71 MATTHEWS, ERNEST R.—Harbour Projections and their effect upon the travel of sand and shingle. *Brit. Assoc. Leaflet* (Birmingham), and *Municipal Journal*, Sept. 19th, p. 1225.
- 72 ——— Coast Erosion and Protection. *London*. Pp. xiv.+147.
- 73 MENNELL, F. P.—A Manual of Petrology. *London*. Pp. 256.
- 74 MILTHERS, V.—Ledeblokke i de skandinaviske Nedisningers sydvestlige Grænseegne og deres Bidrag til Kundskaben om Isstromretningernes Skiften og Aldersfolge. [Indicator-Boulders of the South-West Limit of the Scandinavian Ice-Sheet, and their contribution to a knowledge of the changes and succession of events in connection with the directions of the glacial streams]. [Refers to erratics on the Yorkshire Coast]. *Dansk Geologisk forening*. Bd. 4. Pp. 115-182.

- 75 M[oss], C. E.—Botany at the British Association [refers to Cayton Bay and Whitby fossil plants]. *Nature*, Dec., 25th, pp. 488-491.
- 76 MOYSEY, L.—Some further notes on Palæoxyris and their allied fossils, with special reference to some New Features found in Vetacapsula. *Brit. Assoc. 'Folder,'* pp. 1-2; also *Geol. Mag.* Oct., pp. 453-5.
- 77 OLIVER, F. W. [edited by].—Makers of British Botany : A Collection of Biographies by Living Botanists [includes an account of W. C. Williamson and his work]. *Cambridge*. Pp. 332.
- 78 RAMSAY, ALEXANDER.—Bacteria [refers to evidences of bacteria in the coal-measures]. *Scientific Roll*, April, p. 490.
- 79 RASTALL, R. H.—[See F. H. Hatch].
- 80 REID, CLEMENT.—Submerged Forests. *Cambridge*. Pp. 1-129. See also notice in *Geol. Mag.*, Aug., pp. 370-373.
- 81 ROBERTS, E. E.—The Siege [sic] of Mere Gill [Ingleborough, with plan]. *Yorks. Ramblers' Club Journal*, vol. iv., No. 12, pp. 30-43.
- 82 SALFIELD, HANS.—Certain Upper Jurassic Strata of England. [Brief references to the Kimeridge of Speeton]. *Quart. Journ. Geol. Soc.*, vol. lxi., pt. 3, No. 275, Oct., pp. 423-432.
- 83 SEWARD, A. C.—An Extinct Antarctic Flora (notices 'The Mesozoic Flora of Graham Island,' by Dr. T. G. Halle : refers to Yorkshire Mesozoic plants). *New Phytologist*, vol. xii., Nos. 4 and 5, April and May, pp. 188-189.
- 84 ——— A Contribution to our Knowledge of Wealden Floras, with especial reference to a collection of Plants from Sussex. [References to Yorkshire]. *Quart. Journ. Geol. Soc.*, vol. lxi., pt. 1, pp. 85-116.
- 85 SHAKESPEAR (Mrs.).—[See Ethel M. R. Wood].
- 86 SHARPE, HILDA D.—[See Horace B. Woodward.]
- 87 SHEPPARD, GEORGE.—The Chalk Fossils in the Hull Museum *Trans. Hull Sci. and Field Nat. Club*, vol. iv., pt. 5 pp. 251-257. Also *Hull Museum Publications*, No. 98, Sept., pp. 251-257.
- 88 ——— The Kellaways Rock of South Cave, East Yorkshire. *Naturalist*, Oct., pp. 359-361.



- 89 SHEPPARD, T.—Bibliography. Papers and Records relating to the Geology and Palæontology of the North of England (Yorkshire excepted), published during 1912 [111 entries]. *Naturalist*, July, pp. 260-270.
- 90 — The Museums Association, Hull Conference, July 1913. Guides to the Hull Museums [includes Geological notes]. Pp. 4+52+32+43.
- 91 — Coast Changes at Hornsea. *Naturalist*, Feb., p. 99 (plates).
- 92 — East Yorkshire History in Plan and Chart. *Trans. East Riding Antiq. Soc.*, vol. xix., for 1912, pp. 40-68.
- 93 — Lost Towns of the Yorkshire Coast. *Hull Literary Club Magazine*, vol. iv., pt. 4, pp. 234-240.
- 94 — The 'Hebbles' in the Humber Estuary. *Rep. Brit. Assoc.* (Dundee), 1912, p. 134.
- 95 — Remains of a Seal in the Holderness Glacial Drift. *Naturalist*, May, p. 197.
- 96 S[HEPPARD], T.—In Memoriam: Henry Culpin, 1861-1912 [refers to his geological work in Yorkshire]. *Naturalist*, Jan., pp. 17-19.
- 97 SHEPPARD, THOMAS.—Guide to the Municipal Museum, Royal Institution, Albion Street, Hull. (Fourth Edition). [Includes geological records]. Pp. 52.
- 98 — Excavations [at Kelsey Hill and Burstwick] in Erratic Blocks Committee's Report, *Brit. Assoc. 'Folder'*, p. 2.
- 99 SHEPPARD, THOS.—[Note on Submerged Bank of Boulder Clay in the Humber]. *Naturalist*, Jan., p. 87.
- 100 SMITH, REGINALD A.—Cave-Man Out-of-Doors [refers to Yorkshire Caves]. *Antiquary*, April, pp. 130-133.
- 101 SMITH, STANLEY.—Report upon the Carboniferous Limestone Formation of the North of England with special reference to its Coal Resources [notice of]. *Naturalist*, July, pp. 245-246.
- 102 — On the Genus *Aulophyllum*. *Quart. Journ. Geol. Soc.*, vol. lxix., pt. 1, pp. 51-77.
- 103 STATHER, J. W.—Glacial Committee [report of]. *Naturalist*, Jan., p. 87.
- 104 — Geology [of Stamford Bridge]. *Naturalist*, Sept., p. 320.
- 105 — [See A. R. Dwerryhouse].

- 106 STOPES, MARIE C.—Catalogue of the Mesozoic Plants in the British Museum (Natural History). The Cretaceous Flora. Pt. 1. Bibliography, Algæ and Fungi. *London*. 285 pp.
- 107 STRAHAN, A.—The Coal Resources of Great Britain. In *The Coal Resources of the World*. *Toronto*. Vol. ii., pp. 597-628. [See under Anon].
- 108 SWAINE, A. T.—The Earth: Its Genesis and Evolution considered in the light of the most recent scientific research. *London*. Pp. 277.
- 109 THOMAS, HUGH HAMSHAW.—The Fossil Flora of the Cleveland District of Yorkshire; The Flora of the Marske Quarry, with notes on the Stratigraphy by the Rev. GEORGE JOHN LANE. *Quart. Journ. Geol. Soc.*, vol. lxi, pt. 2 (No. 274), June, pp. 223-251. Abstract in *Nature*, Feb. 13th, p. 663; *Geol. Mag.*, March, pp. 136-137; and *Naturalist*, March, pp. 123-124.
- 110 ——— The Investigation of the Jurassic Flora of Yorkshire. Report of the Committee. *Rep. Brit. Assoc.* (Dundee), 1912, pp. 294-295. Also with same title, *Brit. Assoc. Leaflet* (Birmingham), 1 pp. See also *Naturalist*, Oct., pp. 345-346.
- 111 ——— The Jurassic Plant Beds of Roseberry Topping. *Naturalist*, May, pp. 198-200.
- 112 ——— Some New and Rare Jurassic Plants from Yorkshire. Abstract in *Nature*, May 22nd, p. 312.
- 113 ——— On a New Type of Ginkgoalian Leaf [from Cayton Bay]. *Brit. Assoc. Leaflet* (Birmingham), 1 p. See also *Naturalist*, Oct. 1st, p. 345, and *New Phytologist*, vol. xii., Nos., 9-10, p. 354.
- 114 THOMPSON, CHARLES.—The Derived Cephalopoda of the Holderness Drift. *Quart. Journ. Geol. Soc.*, vol. lxi., pt. 2 (No. 274), June, pp. 169-183. Abstract in *Nature*, Feb. 13th, p. 663; *Geol. Mag.*, March, pp. 137-138; and *Naturalist*, March, p. 124.
- 115 VERNON, ROBERT DOUGLAS.—On the Correlation of the Leicestershire Coalfield. *Brit. Assoc. 'Felder,'* pp. 1-2; also *Geol. Mag.*, Oct., pp. 456-457.

- 116 WALMSLEY, LIONEL.—Coast Changes at Robin Hood's Bay. *Naturalist*, Aug., pp. 280-282.
- 117 WILMORE, A.—Geology [of the Burnsall District]. *Naturalist*, July, pp. 275-276.
- 118 WOOD, ETHEL M. R.—[See Gertrude Elles].
- 119 WOODHEAD, T. W.—Geology [report on]. *Ann. Report Huddersfield Nat. and Photo. Soc.*, pp. 12-13.
- 120 WOODS, HENRY.—A Monograph of the Cretaceous Lamellibranchiata of England, vol. ii., part 9. Ostreidae, Radiolidae, Additions, Distribution, Bibliography, Index. Pp. 341-473, plates lv.-lxii. *Mon. Pal. Soc.* for 1912.
- 121 W[OODWARD], H.—Note by the Editor on the so-called 'Fossil Beads' [found in gravels; refers to Yorkshire]. *Geol. Mag.*, March, pp. 139-143.
- 122 WOODWARD, HORACE B., and SHARPE, HILDA D.—Photographic Supplement to Stanford's Geological Atlas of Great Britain and Ireland. *London*. Pp. 1-113.
- 123 WRIGHT, FLORENCE B.—The Lost Towns of the Yorkshire Coast [review of Mr. Sheppard's book]. *Records of the Past*, vol. xii., pt. 1, pp. 17-21.
- 124 ZITTEL, KARL A. VON.—Text-book of Palæontology [edited by Charles R. Eastman]. Ed. 2. Vol i., pp. xii.+839.

## 1914.

- 1 ANON.—Joints. [Notice of address by Prof. Kendall]. *Naturalist*, Jan., pp. 2-3.
- 2 ——— Gifts to the Leeds University. [The Bingley Collection of lantern slides and the Culpin Collection of Coal-Measure Fossils]. *Ibid.*, Jan., p. 4.
- 3 ——— Cutting Yorkshire Stone. *Quarry*, Jan., pp. 8-10.
- 4 ——— Glaciation of East Lancashire. [Notice of Dr. Jowett's paper]. *Ibid.*, March, pp. 75-76.
- 5 ——— Yorkshire Type Ammonites. [Notice of S. S. Buckman's work, with illustrations of *A. elegantulus*]. *Ibid.*, March, p. 78.
- 6 ——— Yorkshire Ammonites. [Notice of S. S. Buckman's Monograph]. *Ibid.*, May, pp. 141-2.
- 7 ——— Hypocrinus. Sycocrinus. [Notice of F. A. Bather's papers]. *Ibid.*, May, pp. 140-141.

- 8 ANON.—'Cleat' in Coal Seams. *Naturalist*, April, p. 107.
- 9 ——— Yorkshire Drift. *Ibid.*, July, p. 205.
- 10 ——— [Yorkshire, Craven District]. A Review of Quarrying Operations. *Quarry*, August, pp. 215-6.
- 11 ——— A New Yorkshire Trilobite. *Naturalist*, Oct., p. 301.
- 12 ——— Yorkshire Fossil Flora. *Ibid.*, Oct., pp. 301-2.
- 13 ——— A Hornsea 'Earthquake' in 1733, and its effects. *Ibid.*, Oct., pp. 302-303.
- 14 ——— Lancashire Naturalist. [*Megalichthys hibberti* in Yorkshire]. *Ibid.*, Oct., p. 303.
- 15 ——— Marsh Gas at Bradford: A Geological Study. *Ibid.*, April, pp. 110-111.
- 16 ——— The Humber Tunnel [with plan]. *Ibid.*, April, p. 105.
- 17 ——— Early Mining: Alum and Salt. [Notice of 'Victoria History of Yorkshire']. *Ibid.*, March, pp. 77-78.
- 18 ——— Ravenser. *Ibid.*, Nov., p. 330.
- 19 ——— Geological Section of the Yorkshire Naturalists' Union at Hull. [Report of meeting]. *Ibid.*, Dec., pp. 391-2.
- 20 ——— Investigation of Yorkshire Rivers. *Ibid.*, Dec., p. 361.
- 21 ——— Geology [of Harden Moss]. Circular 233 in *Trans. Yorks. Nat. Union*, pt. 35.
- 22 ——— Geology [of Tanfield]. Circular 238 in *Trans. Yorks. Nat. Union*, pt. 35.
- 23 ——— Sections of Strata of the Coal Measures of Yorkshire, together with a few Derbyshire sections, compiled from records of Borings and Sinkings, by a Committee of the Midland Institute of Mining, Civil and Mechanical Engineers. *Sheffield*. Pp. 303.
- 24 ——— Cross Country Sections and Map of Yorkshire Coalfield, [includes map of Yorkshire coalfields, showing collieries and positions of two sections, which are also given in the same cover, namely:—Burnley to Pontefract and Manchester to Doncaster]. *Sheffield*.
- 25 ——— Catalogue of the More Important Papers, especially those relating to Local Scientific Investigations, published by the Corresponding Societies [of the British

- Association] during the year ending May 31st, 1913. *Rep. Brit. Assoc.* (Birmingham) for 1913, pp. 349-364.
- 26 ARBER, E. A. NEWELL.—On the Fossil Flora of the Kent Coalfield. [Brief references to Yorkshire specimens]. *Quart. Journ. Geol. Soc.*, vol. lxx., pt. 1 (No. 277), pp. 54-81.
- 27 BATHER, F. A.—British Fossil Crinoids. X. *Sycocrinus*, Austin, Lower Carboniferous [from Settle, Yorkshire]. *Ann. and Mag. Nat. Hist.*, ser. 8, vol. xiii., Feb., pp. 245-255. [See also *Naturalist*, May, p. 141.]
- 28 BEASLEY, H. C.—Some Fossils from the Keuper Sandstone of Alton, Staffordshire. [Compares with Yorkshire]. *Proc. Liverpool Geol. Soc.*, vol. xii., pt. 1, pp. 35-39.
- 29 [L. L. BELINFANTE: Edited by].—Abstracts of the Proceedings of the Geological Society of London. Session 1913-14, Nos. 946-962, pp. 126.
- 30 [BELINFANTE, L. L.] edited by; [C. P. CHATWIN, compiled by].—Geological Literature added to the Geological Society's Library during the year ended December 31st, 1912. Pp. 1-266.
- 31 BEVAN, D. W.—Geology [of Scarborough]. Circular, No. 221, in *Trans. Yorks. Nat. Union*, pt. 35.
- 32 BEYSCHLAG, F., J. H. L. VOGT, and P. KRUSCH.—The Deposits of the useful Minerals and Rocks. Their origin, form, and content. Translated by S. J. Truscott. Vol. 1, 514 pp.
- 33 BIRKS, S. GRAHAM.—The Crossopterygian Fossil Fishes of this area. I. Introductory [*Megalichthys hibberti*]. *The Lancs. and Cheshire Nat.*, Aug., pp. 185-187. II. The Genus *Megalichthys*, *loc. cit.*, Sept., pp. 227-236. [See also *Naturalist*, Oct., p. 303].
- 34 BISAT, W. S.—The Millstone Grit sequence between Masham and Great Whernside. *Proc. Yorks. Geol. Soc.*, vol. xix., pt. 1. pp. 20-24.
- 35 BRADSHAW, C. On the Occurrence of Calcite Crystals in a Coal Pit [Orgreave Colliery, near Sheffield]. *Proc. Sheffield Nat. Club*, vol. ii., pp. 43-4.
- 36 BRADSHAW, [C.].—Geology [of Roche Abbey]. Circular, 243, in *Trans. Yorks. Nat. Union*, pt. 35.
- 37 BRADSHAW, C.—[See J. Holmes].

- 38 BUCKMAN, S. S.—Yorkshire Type Ammonites. Part xii. (8 plates and descriptions), pt. xiii. (9 plates and descriptions), pt. xiv. (8 plates and descriptions). These contain figures and descriptions of (xii), *Porpoceras verticosum*, *A. obsoletus*, *A. elegantulus*, *A. sinuatus*, *A. socialis*, *A. aureolus*, *Tiltoniceras costatum*; (xiii), *A. hyperbolicus*, *A. subtensis*, *Ægoceras* (?) *finitimum*, *A. hastatus*; (xiv), *A. spicatus*, *Deroceras impavidum*, *A. mutatus*, *A. ovatulus*, *A. gracilis*, and *A. heptangularis*. [See also *Naturalist*, March, p. 78].
- 39 BURNET, ARTHUR.—Notes on Sections in a Quarry at Robin Hood, near Leeds. *Trans. Leeds Geol. Assoc.*, pt. xvii., pp. 31-35.
- 40 BURRELL, BENJAMIN ARTHUR.—The Analysis of Ilkley Spa Water. *Proc. Yorks. Geol. Soc.*, vol. xix., pt. 1, pp. 14-17.
- 41 BURTON, J. J.—Geology [of Eskdale]. *Naturalist*, Oct., pp. 323-324.
- 42 ——— Jurassic Flora Committee [report of]. *Ibid.*, Jan., p. 37.
- 43 ——— General Features [Runswick]. Circular 217, in *Trans. Yorks. Nat. Union*, pt. 35.
- 44 ——— Geology [of Middleton-in-Teesdale]. Circular 222, in *Trans. Yorks. Nat. Union*, pt. 35.
- 45 ——— Geology [of Sleights]. Circular 253, in *Trans. Yorks. Nat. Union*, pt. 35.
- 46 BURTON, [J. J.].—Geology [of Great Ayton]. Circular 247, in *Trans. Yorks. Nat. Union*, pt. 35.
- 47 CARTER, W. LOWER.—Geology [of Kirkby Moorside]. Circular 225 in *Trans. Yorks. Nat. Union*, pt. 35.
- 48 CASE, GERALD O.—Coast Sand-Dunes, Sandpits and Sand Wastes. *London*. Pp. viii.+162.
- 49 CHAPMAN, SARAH E.—Some Petrological Characteristics of Underclays. *Trans. Leeds Geol. Assoc.*, pt. xvii., pp. 8-15.
- 50 CHATWIN, C. P.—[See L. L. Belinfante].
- 51 CULPIN, H.—Geology [of Riccall]. Circular 236 in *Trans. Yorks. Nat. Union*, pt. 35.
- 52 ——— Geology [of Askern]. Circular 239 in *Trans. Yorks. Nat. Union*, pt. 35.

- 53 DEELEY, R. M.—Ice-Flows in the Trent Basin. *Geol. Mag.*, Feb., pp. 69-73; *Naturalist*, April, pp. 107-8.
- 54 DENNING, W. F.—A Meteoric Fall in Lancashire [with list of previous English falls]. *Nature*, Nov., 5th, pp. 258-9.
- 55 DWERRYHOUSE, A. R.—Erratic Blocks of the British Isles; report of Committee. [Includes note on Kelsey Hill, Holderness, by T. SHEPPARD]. *Rep. Brit. Assoc.* (Birmingham) 1913, pp. 146-147.
- 56 ——— Geology [of Market Weighton]. Circular 265 in *Trans. Yorks. Nat. Union*, pt. 35.
- 57 ELGEE, FRANK.—Geology [of Castleton]. Circular 230 in *Trans. Yorks. Nat. Union*, pt. 35.
- 58 ELLES, GERTRUDE L., and ETHEL M. R. WOOD, [Mrs. Shakespear].—A Monograph of British Graptolites. *Monogr. Palæont. Soc.* for 1913, published 1914, pt. x., pp. 487-526, plates i.-lii.
- 59 EVANS, JOHN W.—The Wearing Down of the Rocks. Part II., Chemical Action in Terrestrial Areas. [Brief reference to anhydrite and rock salt deposits]. *Proc. Geol. Assoc.*, vol. xxv., pt. 4, pp. 229-270.
- 60 EVERETT, J. H.—[See Arthur Burnet].
- 61 GARDINER, C. I.—An Introduction to Geology. 186 pp.
- 62 GARWOOD, E. J.—Presidential Address to Section C (Geology). [Deals with algæ as rock-forming agents]. *Rep. Brit. Assoc.* (Birmingham) 1913, pp. 453-472.
- 63 GILLIGAN, [A.].—Geology [of Meanwood, Leeds]. Circular 255 in *Trans. Yorks. Nat. Union*, pt. 35.
- 64 GREGORY, E. E.—[See J. W. Stather].
- 65 GREGORY, J. W.—The Chiltern Wind Gaps. [Refers to the Vale of Pickering]. *Geol. Mag.*, April, pp. 145-148.
- 66 HARGREAVES, J. A.—Fossil Footprints near Scarborough [in the Upper Estuarines]. *Naturalist*, May, pp. 164-156.
- 67 ——— Report on Geology. *Scarborough Phil. and Arch. Soc., Ann. Rep.*, 1913, p. 31.
- 68 HARMER, F. W.—The Pliocene Mollusca of Great Britain, being supplementary to S. V. Wood's Monograph of the Crag Mollusca. Pt. 1, *Monogr. Palæont. Soc.* for 1913, pp. 1-200, plates i.-xxiv.

- 69 HAWKESWORTH, [E.].—Geology [of Knaresborough]. Circular 250 in *Trans. Yorks. Nat. Union*, pt. 35.
- 70 ——— Geology [of Arthington]. Circular 229 in *Trans. Yorks. Nat. Union*, pt. 35.
- 71 ——— Reports of Excursions [to Woodlesford, Ingleton, Roundhay Park, Robin Hood Quarries, Knaresborough, Leeds Steel Works, Askern, Roundhay, Burnsall]. *Trans. Leeds Geol. Assoc.*, pt. xvii., pp. 39-44.
- 72 HILL, C. A.—Gaping Ghyll, Yorkshire: Its Exploration and Survey. *Rep. Brit. Assoc.* (Birmingham), 1913, pp. 547-8.
- 73 HIND, WHEELTON.—Palæontological Notes on the Millstone Grit Beds between Masham and Great Whernside. *Proc. Yorks. Geol. Soc.*, vol. xix., pt. 1, pp. 25-34.
- 74 HOLLAND, THOMAS H.—Report on behalf of the Delegates to the International Geological Congress, Canada, 1913. [Refers to Coal-reserves in British Coalfields]. *Trans. Manchester Geol. and Min. Soc.*, vol. xxxiii., pt. 11, pp. 430-436.
- 75 HOLMES, J. and C. BRADSHAW.—Geological Section [report of]. *Naturalist*, Jan., pp. 35-36.
- 76 HORNE, JOHN.—[See W. B. Wright].
- 77 HUNTLEY, LOCKWOOD.—Ravenser: and the rise of the De-la-Pole Family, of Hull. *Beverley*. 8vo. Pp. 21. [See also *Naturalist*, Nov., p. 330].
- 78 JACKSON, J. WILFRID.—Holocene Mollusca from Clapham, Yorkshire. *Naturalist*, April, pp. 121-122.
- 79 JENKINS, RHYS.—The Alum Trade in the 15th and 16th Centuries, and the beginnings of the Alum Industry in England. [Refers to Yorkshire]. *South-Eastern Naturalist*, pp. 57-67.
- 80 J[OHNS], C.—Annual Report [of the Yorkshire Geological Society] for 1912. Annual Report for 1913. *Proc. Yorks. Geol. Soc.*, vol. xix., pt. 1, pp. 35-38.
- 81 JOHNS, [COSMO].—Geology [of Sedbergh]. Circular 218 in *Trans. Yorks. Nat. Union*, pt. 35.
- 82 ——— Geology [of Malham]. Circular 223 in *Trans. Yorks. Nat. Union*, pt. 35.
- 83 JOHNS, COSMO.—Geology [of Middleton-in-Teesdale]. Circular 222 in *Trans. Yorks. Nat. Union*, pt. 35.



- 84 JOWETT, ALBERT.—On the Glacial Geology of East Lancashire. *Quart. Journ. Geol. Soc.*, vol. lxx., pt. 2, No. 278, pp. 199-231 (maps). Abstract in *Geol. Mag.*, March, pp. 138-9, also *Naturalist*, March, pp. 75-76.
- 85 K[ENDALL], P. F. —The Lower Severn Plain during the Glacial Period. [Notice of J. W. Gray's paper; refers to Yorkshire]. *Naturalist*, March, pp. 96-97.
- 86 KENDALL, PERCY F.—On 'Cleat' in Coal-Seams. *Geol. Mag.*, Feb., pp. 49-53. See also *Naturalist*, April, p. 107.
- 87 KENDALL, P. F.—The Origin of the Yorkshire Lakes. *Naturalist*, Dec., pp. 362-363.
- 88 ——— 'Evidences of Climatic Changes in Geological Time' [abstract]. *Trans. Leeds Geol. Assoc.*, pt. xvii., pp. 20-24.
- 89 KING, W. B. R.—A New Trilobite from the Millstone Grit of Yorkshire. [*Griffithides shunnerensis* from Shunner Fell]. *Geol. Mag.*, Sept., pp. 390-394. [See also *Naturalist*, Oct., p. 301].
- 90 KRUSCH, P.—[See F. Beyschlag].
- 91 LANE, G. J.—Geology [of Marske]. Circular No. 228 in *Trans. Yorks. Nat. Union*, pt. 35.
- 92 LATHAM, ERNEST.—The Maintenance of Foreshores. [Very brief references to Yorkshire]. *London*. Pp. vi.+84.
- 93 LEWIS, A. L.—Standing Stones in Yorkshire. [Describes Rudstone and Boroughbridge Monoliths]. *Records of the Past*, March-April, vol. xiii., pt. 2, pp. 87-91.
- 94 LOMAX, JAMES.—Further Researches in the Microscopical Examination of Coal, especially in relation to spontaneous combustion [with reproductions of 60 photo-micrographs of sections of coal from Yorkshire, etc.]. *Trans. Manchester Geol. and Min. Sec.*, vol. xxxiii., pt. 10, pp. 355-398.
- 95 LYELL, CHARLES [the late].—The Geological Evidence of the Antiquity of Man [with Introduction by R. H. RASTALL. *London*. Pp. xx.+407.
- 96 MARTIN, EDWARD A.—Problems in Coast Erosion. [Refers to the Yorkshire Coast]. *South-Eastern Naturalist*, pp. 41-56.
- 97 ——— 'Dew Ponds, History, Observation and Experiment'

- [gives account of the Yorkshire Wold ponds by J. R. MORTIMER]. *London*. Pp. 208.
- 98 MORTIMER, J. R.—[See Edward A. Martin].
- 99 MOTTRAM, T. H.—Quarry Inspection Reports, 1913. The Yorkshire and North Midland Division (No. 3). *Quarry*, Dec., pp. 318-320.
- 100 MOYSEY, L.—Some further Notes on Palæoxyris and other Allied Fossils, with Special Reference to some New Features found in *Vetacapsula*. *Rep. Brit. Assoc.* (Birmingham), 1913, pp. 492-3.
- 101 PARK, JAMES.—A Text-Book of Geology. [Many references to northern counties]. *London*. Pp. xv.+598.
- 102 PARKER, RUPERT.—Equipment of a Yorkshire Quarry [Craven District]. *Quarry*, Dec., pp. 310-314.
- 103 PELOURDE, FERNAND.—Paléontologie végétale. Vol. I., Cryptogames cellulaires et cryptogames vasculaires. *Paris*. 8vo. (Doin). Pp. xxviii., 360, xii., 80 text figs. Forming part of *Encyclopédie scientifique*.
- 104 PRATT, C. T.—Geology [of Cawthorne]. Circular 219, *Trans. Yorks. Nat. Union*, pt. 35.
- 105 RASTALL, R. H.—[See Charles Lyell].
- 106 ROBINSON, W.—Geology [of Tebay]. Circular 240 in *Trans. Yorks. Nat. Union*, part 35.
- 107 ——— Geology [of Kirkby Stephen]. Circular 244 in *Trans. Yorks. Nat. Union*, pt. 35.
- 108 ——— Geology [of Askrigg]. Circular 252 in *Trans. Yorks. Nat. Union*, pt. 35.
- 109 ——— [Geology of Sedbergh]. Circular 218 in *Trans. Yorks. Nat. Union*, pt. 35.
- 110 ——— Geology [of Ingleton]. Circular 232 in *Trans. Yorks. Nat. Union*, pt. 35.
- 111 ROEBUCK, W. DENISON.—Salient Features in the History of the Yorkshire Naturalists' Union. Being the Presidential address delivered at Sheffield, 29th January, 1904 [reprint; having references to geology]. *Trans. Yorks. Nat. Union*, pt. 35, pp. 1-16.
- 112 SAUNDERS, T. W.—Geology [of Runswick]. Circular 217 in *Trans. Yorks. Nat. Union*, pt. 35.
- 113 SEWARD, A. C.—Climate as Tested by Fossil Plants. *Quart. Journ. Roy. Meteorol. Soc.*, vol. xl., No. 171, July,

- pp. 203-212. Reprinted in *Nature*, Oct. 29th, pp. 242-246. See also *Knowledge*, May, p. 190.
- 114 SEWARD, A. C.—Antarctic Fossil Plants. British Antarctic ('Terra Nova') Expedition, 1910. *Natural History Report, Geology*, vol. i., No. 1, pp. 1-49 (plates). 4to. [Brief references to Yorkshire].
- 115 ——— Wealden Floras [brief references to Yorkshire]. *Hastings and East Sussex Naturalist*, vol. ii., No. 3, pp. 126-142.
- 116 SEWELL, J. T.—Coast Erosion at Whitby. *Naturalist*, April, pp. 113-114.
- 117 ——— [See J. W. Stather].
- 118 SHAKESPEAR, Mrs.—[See Ethel M. R. Wood].
- 119 SHARP, HILDA D.—[See Horace B. Woodward].
- 120 SHEPPARD, GEORGE.—*Holaster planus* in the Hessele Chalk. *Naturalist*, June, p. 192.
- 121 ——— Faulting in Boulder Clay at Dimlington, E. Yorks. *Naturalist*, July, p. 206.
- 122 ——— Additions to the Fauna of the Upper Chalk, Flamborough. *Naturalist*, Sept., p. 274.
- 123 ——— *Cestracion* sp. from the Yorkshire Chalk [Speeton]. *Naturalist*, Aug., p. 244.
- 124 S[HEPPARD], T.—Yorkshire Natural History 200 years Ago [Spa Wells, etc.]. *Naturalist*, Oct., pp. 307-314, Nov., pp. 337-352.
- 125 ——— In Memoriam: Alfred John Jukes-Browne, F.R.S., F.G.S., 1851-1914 [brief references to his work in Yorkshire and Lincolnshire]. *Naturalist*, Oct., p. 325.
- 126 SHEPPARD, T.—Superficial Geology [of Market Weighton]. Circular 215 in *Trans. Yorks. Nat. Union*, pt. 35.
- 127 ——— Geology [of Spurn]. Circular 224 in *Trans. Yorks. Nat. Union*, pt. 35.
- 128 ——— Teeth of *Diplopodia* (*Pseudodiadema*) *versipora* [from Seamer]. *Naturalist*, May, p. 144.
- 129 ——— Geology [of Knaresborough]. *Naturalist*, June, pp. 186-188.
- 130 ——— The Early History of Filey. *Ibid.*, Sept., pp. 269-273.
- 131 ——— Bibliography: Papers and Records relating to the Geology and Palæontology of the North of England

- (Yorkshire excepted), published during 1913. *Naturalist*, May, pp. 161-166, June, pp. 193-199.
- 132 SHEPPARD, T.—[Geological Notes on Askrigg]. *Ibid.*, Sept., pp. 276-277.
- 133 ——— Excavations at Peaseholm, Scarborough. *Trans. East Riding Antiq. Soc.*, vol. xx., pp. 35-40 (plans).
- 134 ——— [See A. R. Dwerryhouse].
- 135 ——— [See J. W. Stather].
- 136 SHEPPARD, THOMAS.—Yorkshire by Pen and Picture. F'cap. [Includes notes on geology, etc.]. *Hull*. Pp. 216
- 137 SHERLOCK, R. L.—The Foraminifera of the Speeton Clay of Yorkshire. *Geol. Mag.*, May, pp. 216-222 and June, pp. 255-265 ; July, pp. 289-296.
- 138 SHIMER, HERVEY WOODBURN.—An Introduction to the Study of Fossils (plants and animals). 450 pp.
- 139 SMITH, H. G.—Minerals and the Microscope. An Introduction to the Study of Petrology. *London*. 116 pp.
- 140 SPATH, LEONARD FRANK.—On the Development of *Tragophylloceras loscombi* (J. Sowerby) [brief references to Yorks.]. *Quart. Journ. Geol. Soc.*, vol. lxx., pt. 3, No. 279, Dec., pp. 336-362.
- 141 STANFORD, E.—[See Horace B. Woodward].
- 142 STATHER [J.W.]—Geology [of Filey]. *Naturalist*, Aug., pp. 255-256.
- 143 STATHER, J. W.—Glacial Committee [report of, with remarks by E. E. GREGORY and T. SHEPPARD]. *Naturalist*, Jan., p. 37.
- 144 ——— Coast Erosion Committee [report of, with note by J. T. SEWELL]. *Naturalist*, Jan., pp. 36-37.
- 145 ——— Geology [of Filey]. Circular 251 in *Trans. Yorks. Nat. Union*, pt. 35.
- 146 ——— Geology [of Stamford Bridge]. Circular 246 in *Trans. Yorks. Nat. Union*, pt. 35.
- 147 STATHER, J. W.—Geology [of Bridlington]. Circular 237 in *Trans. Yorks. Nat. Union*, pt. 35.
- 148 STOPES, MARIE C.—Palæobotany: Its Past and its Future [Yorkshire Oolitic specimens figured]. *Knowledge*, Jan., pp. 115-124.
- 149 TAYLOR, JOHN W.—Dominancy in Nature and its correlation with Evolution, Phylogeny and Geographical

- Distribution [reprint]. *Trans. Yorks. Nat. Union*, pt. 35, pp. 1-40.
- 150 TAYLOR, JOHN W.—Monograph of the Land and Fresh-water Mollusca of the British Isles, pt. 20. [Includes particulars of the occurrence of fossil and sub-fossil forms of *Helicogona arbustorum*]. March 14th, pp. 417-480, plates 26, 35, and 45.
- 151 THOMAS, H. HAMSHAW.—The Investigation of the Jurassic Flora of Yorkshire. Report of Committee [refers to work in Cleveland, etc.]. *Rep. Brit. Assoc.* (Birmingham) 1913, pp. 264-265. Se also *Naturalist*, Oct., pp. 301-302.
- 152 ——— On a New Type of Ginkgoalian Leaf [from Cayton Bay]. *Rep. Brit. Assoc.* (Birmingham), 1913, p. 709.
- 153 THOMAS, IVOR.—British Carboniferous Producti. 1 - Genera *Pustula* and *Overtonia*. *Mem. Geol. Survey. Palæontology*, vol. 1, pt. 4, pp. 197-366; Plates xvii-xx [figures and describes *Pustula elegans* (M'Coy); *P. venusta* gen. et sp. nov.; *P. subelegans* gen. et sp. nov.; *P. punctata* (Mart.); *P. ovalis* (Phill.; and *P. pyxidiformis* (de Koninck): from Yorkshire].
- 154 THOMPSON, C.—The Ammonities of the Lias. [Abstract]. *Trans. Leeds Geol. Assoc.*, pt. 27, pp. 16-19.
- 155 TIDDEMAN, R. H.—Geology [of Newton]. Circular 216 in *Trans. Yorks. Nat. Union*, pt. 35.
- 156 TRAVIS, CHARLES B.—President's Address. ('Some evidences of Peneplanation in the British Isles'). *Proc. Liverp. Geol. Soc.*, vol. xii., pt. 1, pp. 1-31.
- 157 TRECHMANN, C. T.—On the Lithology and Composition of Durham Magnesian Limestones [brief references to Yorkshire]. *Quart. Journ. Geol. Soc.*, vol. lxx., pt. 2, No. 278, pp. 232-265. Abstract in *Nature*, February 26th, page 729.
- 158 TRUSCOTT, S. J.—[See F. Beyschlag]
- 159 TURNER, CHARLES.—The Microscopy of the Manchester Water Supply. *Annual Rep. and Trans. Manchester Microscopical Society*, 1913. Pp. 44-58.
- 160 VOGT, J. H. L.—[See F. Beyschlag].
- 161 WALMSLEY, LIONEL.—Guide to the Geology of the Whitby District. *Whitby*. Pp. 37. Noticed in *Naturalist*, May, p. 167.

- 162 W[ATTAM], W. E. L.—Yorkshire Naturalists at Filey [brief geological notes]. *Naturalist*, July, pp. 221-224.
- 163 WHITMILL, T. F.—The Absorption of Oxygen by Coal, 1. *Trans. Manch. G. and M. Soc.*, vol. xxxiii., 10, pp. 326-354.
- 164 WILMORE, ALBERT.—Geology [of Burnsall]. Circular 245 in *Trans. Yorks. Nat. Union*, part 35.
- 165 ——— A First Book of Geology. *London*. 141 pp.
- 166 WOOD, ETHEL M. R.—[See Gertrude L. Elles].
- 167 WOODHEAD, T. W.—Geology [Section near Huddersfield]. *Ann. Rep. Hudders. Nat. and Photo. Soc.*, for 1913-14, p. 12.
- 168 WOODWARD, HORACE B.—Stanford's Geological Atlas of Great Britain and Ireland, with plates of Characteristic Fossils . . . . Ed. 3. *London*. 8vo. Pp. xii.+214. With photographic supplement by Hilda D. Sharp.
- 169 WRIGHT, W. B.—The Quarternary Ice Age. *London*. Pp. xxiv.+464 [references to northern glacials]. Rev. in *Nature* by John Horne, Dec. 24th, pp. 451-452.

[No date]

- 1 THORP, W.—'Geological Diagram of the Yorkshire Coal Field.' The above title appears on the leather covering of a diagram  $5\frac{1}{2}$  feet long by 2 feet wide. The upper part is described "Diagram connecting the several coal beds in the Yorkshire coal field from north to south, and exhibiting their relative number, thickness and identity." This section begins at Thorner, crosses the Calder valley at Allerton Bywater, passes Glass Houghton, Pontefract, Melton Park, the Don Valley, and on into Derbyshire. The lower one is headed "2nd Diagram which is a continuation downwards of the upper diagram, to lower strata and over a more western line of country." This shows a section from the river Aire at Armley, past Gomersal, Stainbro' Park, and on into Derbyshire. The scale of the section is 60 yards to the inch vertical, 1 inch to the Mile horizontal.

Bound up with my copy, and evidently part of the same scheme, is a "Vertical Section across the Yorkshire coal field from east to west." Vertical scale 120 yards to the inch, horizontal scale 2 miles to the inch. This diagram measures 3 feet 6 inches by 8 inches.\*

\* There is no date to these plans, but judging from information in the Proceedings of the Yorkshire Geological etc. Society, the date is about 1847. T.S.

## 1.—MAPS AND SECTIONS OF THE GEOLOGICAL SURVEY.

*On application to the Director General of the Ordnance Survey, Southampton, uncoloured copies of these maps, with the geological lines printed on, may be obtained for private use or for teaching purposes.*

*There is no Drift Edition of some of the earlier maps, and in this case 'Solid only' is placed before the date. Where no solid map is published, the words 'Drift only' are used. The Old Series Maps (O.S.) of a higher number than 88 correspond with a New Series map, and the number of the latter is added in brackets, thus, [N.S. 59].*

### MAPS—SCALE 1 INCH TO A MILE.

#### OLD SERIES—Hand-coloured.

##### SHEET

- 81 N.E.—Moors W. of Sheffield, by PROF. J. PHILLIPS, 1852. Additions by A. H. GREEN, C. LE N. FOSTER, and J. R. DAKYNS. Solid only, 1866.
- 82 N.W.—Sheffield, by PROF. J. PHILLIPS and W. W. SMYTH, 1852. Additions by A. H. GREEN, J. R. DAKYNS, and J. C. WARD, 1867. Additions by A. H. GREEN, J. R. DAKYNS, J. C. WARD, R. RUSSELL, and T. V. HOLMES, Solid only, 1878.
- [ 82 N.E.—Tickhill, Harthill, by W. T. AVELINE, 1861. Additions by A. H. GREEN and T. V. HOLMES, 1875. Additions by W. GIBSON. Solid only, 1897.
- 85—Spurn Head, by C. REID. Drift only, 1883.
- 86—Hull, South Cave, Howden, by J. R. DAKYNS, C. FOX-STRANGWAYS, A. C. G. CAMERON, W. A. E. USSHER, C. REID, and A. J. JUKES BROWNE, Solid and Drift, 1887.
- 87 N.W.—Wakefield, Pontefract, Kippax, by W. T. AVELINE, A. H. GREEN, R. RUSSELL, and T. V. HOLMES. Solid only, 1877.
- 87 N.E.—Knottingley, Thorne, Snaith, by W. T. AVELINE and T. MCK. HUGHES. Solid, some drift in eastern part, 1863.

## SHEET

- 87 S.W.—Barnsley, Swinton, by W. T. AVELINE, A. H. GREEN, J. C. WARD, R. RUSSELL, and T. V. HOLMES. Solid only 1878.
- 87 S.E.—Doncaster, by W. T. AVELINE, 1863. Additions by A. H. GREEN. Solid, Drift in eastern part, 1870, 1876.
- 88 N.W.—Todmorden, by E. HULL, J. R. DAKYNS, J. C. WARD, and C. FOX-STRANGWAYS. Solid only, 1870.
- 88 N.E.—Halifax, Huddersfield, by A. H. GREEN, J. R. DAKYNS, J. C. WARD, and R. RUSSELL. Solid only, 1874.
- 88 S.W.—Marsden, Saddleworth, by E. HULL, 1863. Drift edition, 1874.
- 88 S.E.—Penistone, by A. H. GREEN, J. R. DAKYNS, and J. C. WARD. Solid only, 1868.
- 91 N.E. [N.S. 59].—Bentham, Bowland Forest, by J. R. DAKYNS, R. H. TIDDEMAN, and C. E. DE RANCE. Solid and Drift, 1884.
- 91 S.E. [N.S. 67].—Bentham, Bowland Forest, by R. H. TIDDEMAN, C. E. DE RANCE, and J. SHELSWELL. Solid and Drift, 1883.
- 92 N.W. [N.S. 60].—Settle, by W. T. AVELINE, T. Mc K. HUGHES, W. H. DALTON, R. H. TIDDEMAN, and W. GUNN. Solid and Drift, 1892.
- [ 92 N.E. [N. S. 61].—Grassington, Pateley Bridge, by J. R. DAKYNS, R. H. TIDDEMAN, J. LUCAS, C. FOX-STRANGWAYS, and W. H. DALTON. Solid only, 1889.
- 92 S.W. [N.S. 68].—Gisburn, Thornton in Craven, by E. HULL, R. H. TIDDEMAN, and W. GUNN, 1873. New edition, 1887. Additions by R. H. TIDDEMAN. Solid and Drift, 1891.
- 92 S.E. [N.S. 69].—Bradford, Keighley, Skipton, Otley, Ilkley, by J. R. DAKYNS, J. LUCAS, C. FOX-STRANGWAYS, R. RUSSELL, W. H. DALTON, and W. GUNN, 1878. Solid only.
- 93 N.W. [N.S. 62].—Harrogate, Easingwold, by W. T. AVELINE, J. R. DAKYNS, and C. FOX-STRAGWAYS. Solid only, 1874.
- [ 93 N.E. [N.S. 63].—York, by C. FOX-STRANGWAYS. Solid, 1882.



## SHEET

- 93 S. W. [N.S. 70].—Leeds, Wetherby, by W. T. AVELINE, J. C. WARD, J. R. DAKYNS, R. RUSSELL, 1870. Revised by J. LUCAS. Solid only, 1873.
- 93 S.E. [N.S. 71].—Selby, Pocklington, by J. R. DAKYNS, C. FOX-STRANGWAYS, and A. C. C. CAMERON. Solid only, 1885.
- 94 N.W. [N.S. 64].—Driffield, by J. R. DAKYNS, and C. FOX-STRANGWAYS. Solid, 1884.
- 94 N.E. [N.S. 65].—Bridlington, by J. R. DAKYNS, and C. FOX-STRANGWAYS. Solid, 1882.
- 94 S.W. [N.S. 72].—Market Weighton, Beverley, by J. R. DAKYNS and C. FOX-STRANGWAYS. Solid, 1884.
- 94 S.E. [N.S. 73].—(See New Series, below).
- 95 N.W. [N.S. 44].—Scarborough, Robin Hood's Bay, by C. FOX-STRANGWAYS, and G. BARROW. Solid, 1881.
- 95 S.W. [N.S. 54].—Scarborough, Filey, by C. FOX-STRANGWAYS. Solid, 1881.
- 95 S.E. [N.S. 55].—Speeton, Flamborough Head, by C. FOX-STRANGWAYS. Solid, 1881.
- 96 N.W. [N.S. 42].—Northallerton, Stokesley, by H. H. HOWELL, C. FOX-STRANGWAYS, G. BARROW, and A. C. G. CAMERON. Solid, 1883.
- 96 N.E. [N.S. 43].—Grosmont, Rosedale Abbey, by C. FOX-STRANGWAYS, C. REID, and G. BARROW. Solid, 1883.
- 96 S.W. [N.S. 52].—Thirsk, Ripon, by H. H. HOWELL, C. FOX-STRANGWAYS, G. BARROW, and A. C. G. CAMERON. Solid, 1884.
- 96 S.E. [N.S. 53].—Malton, Helmsley, Pickering, by C. FOX-STRANGWAYS. Solid, 1882. New edition, 1908.
- 97 N.W. [N.S. 40].—Muker, Askrigg, by T. MC K. HUGHES, J. R. DAKYNS, R. H. TIDDEMAN, R. RUSSELL, J. C. GOODCHILD, C. E. DE RANCE, C. T. CLOUGH, A. STRAHAN, G. BARROW. Solid and Drift, 1889.
- 97 N.E. [N.S. 41].—Richmond, by W. GUNN, J. G. GOODCHILD, G. BARROW. Solid and Drift, 1889.
- 97 S.W. [N.S. 50].—Ingleton, Hawes, Kettlewell, by T. MC K. HUGHES, J. R. DAKYNS, R. H. TIDDEMAN, C. FOX-STRANGWAYS, W. GUNN, J. G. GOODCHILD, A. STRAHAN. Solid and Drift, 1889.

## SHEET

- 97 S.E. [N.S. 51].—Masham, Aysgarth, by J. R. DAKYNS, L. LUCAS, W. H. DALTON, J. C. GOODCHILD, and W. GUNN. Solid only, 1879.
- 98 N.E. [N.S. 39].—Sedbergh, by T. MC K. HUGHES and J. G. GOODCHILD. F. RUTLEY, G. H. WOLLASTON, G. H. LIGHTFOOT, 1871. Additions by J. R. DAKYNS, E. J. HEBORT, 1879. Revised by R. H. TIDDEMAN, A. STRAHAN. Drift edition, 1887.
- 98 S.E. [N.S. 49].—Burton in Lonsdale, Moors S. of Sedburgh, by W. T. AVELINE, T. MC K. HUGHES, and R. H. TIDDEMAN, 1869. Revised by A. STRAHAN, G. BARROW, 1892.
- 102 N.E. [N.S. 25].—Cronkley Scar, by D. BURNS, W. GUNN, and C. T. CLOUGH. Solid and Drift, 1883.
- 102 S.E. [N.S. 31].—Lune Forest, Cotherstone Moor, by W. T. AVELINE, T. MC K. HUGHES, J. R. DAKYNS, R. H. TIDDEMAN, R. RUSSELL, W. H. DALTON, W. GUNN, J. G. GOODCHILD, and C. T. CLOUGH. Solid and Drift, 1893.
- 103 S.W. [N.S. 32].—Barnard Castle, Bowes, by H. H. HOWELL and W. GUNN, 1881. Drift edition, 1883. Revised, 1889.
- 103 S.E. [N.S. 33].—Middlesbrough, by H. H. HOWELL, A. C. G. CAMERON, and G. BARROW, 1880.
- 104 S.W. [N.S. 34].—Redcar, Guisborough, by G. BARROW, 1880.
- 104 S.E. [N.S. 35].—Whitby, by G. BARROW, 1880.

## NEW SERIES : DRIFT EDITION. Printed in Colours.

*The maps enumerated below were originally issued hand-coloured ; these are now withdrawn. Their numbers in the Old Series and date of publication are given after each New Series map. No Colour-printed, Solid Edition, has yet been published of any of the Yorkshire maps.*

## SHEET

- 33—Middlesbrough, 1910. O.S. 103 S.E., 1883.
- 34—Redcar, Guisborough, 1909. O.S. 104 S.W., 1883.
- 35—Whitby (inset in 44), 1909. O.S. 104 S.E., 1881.

## SHEET

- 42—Northallerton, Stokesley, 1911. O.S. 96 N.W., 1883.
- 43—Grosmont, Rosedale Abbey, 1909. O.S. 96 N.E., 1883.
- 44—Scarborough, Robin Hood's Bay, 1909. O.S. 95 N.W., 1881.
- 52—Thirsk, Ripon, 1912. O.S. 96 S.W., 1884.
- 53—Malton, Helmsley, Pickering, 1909. O.S. 96 S.E., 1882.
- 54—Scarborough, Filey, 1908. O.S. 95 S.W., 1881.
- 55—Flamborough Head, 1909. O.S. 95 S.E., 1881.
- 63—York, 1909. O.S. 93 N.E., 1882.
- 64—Driffield, 1909. O.S. 94 N.W., 1884.
- 65—Bridlington, 1909. O.S. 94 N.E., 1882.
- 71—Selby, Pocklington, 1909. O.S. 93 S.E., 1885.
- 72—Market Weighton, 1909. O.S. 94 S.W., 1884.
- 73—Hornsea, 1909. O.S. 94 S.E., 1883.

## INDEX MAPS—SCALE 4 MILES TO AN INCH.

OLD SERIES\*: Solid only. Printed in Colours.

- 5—Western and Central Yorkshire, including Saltburn, York, and Doncaster, 1896. Revised, 1906.
- 6—Yorkshire Coast from Staithes, north of Whitby, to the mouth of the Humber, 1889.
- 8—Southern end of Yorkshire, Sheffield, 1896. Revised, 1901.

## NEW SERIES.

- 4—Yorkshire, north of Wensleydale and Scarborough. Solid only, 1907.
- 7—Yorkshire, west of Hull and Scarborough and north of Doncaster. Solid only, 1907.
- 8—East Yorkshire, Flamborough Head and Holderness. Drift Edition, 1907. Solid only, 1908.

\* Out of print.

**HORIZONTAL SECTIONS.**

*These are engraved on Copper plates, and are drawn on a true scale of 6 inches to a mile and coloured (by hand) in accordance with the maps. Those marked thus \* have brief explanations. Price 2d. each.*

## SHEET

- 64—From Northwich to Marsden, Yorkshire ; through Bowdon, Altringham, Manchester, and Glodwick. [Maps 88 S.W. ; and 6 inch Yorkshire, 259, 270, 271], by E. HULL, 1864. (Withdrawn).
- 69\*—From Doghill Green, Cheshire, across the Poynton Coalfield, the Peak of Derbyshire, the Coalfield of Hallamshire, North of Sheffield. [Maps 82 N.W., 1-inch ; and 289, 290, 293, 294, 295, 6-inch Yorkshire], by A. H. GREEN, 1867. Revised, 1872.
- 85—No. 1, From Hameldon Hill across the Burnley Basin and the Ribble Valley, to the River Hodder in the Forest of Bowland. 2, From Black Hambleton through Burnley to the River Hodder at Slaidburn, Yorkshire. [Maps 88 N.W., 91 S.E., 92 N.W., 92 S.W. ; and 164, 165, 181, 182, 198, 229, 6-inch Yorkshire], by E. HULL, R. H. TIDDEMAN, and C. E. DE RANCE, 1871.
- 88\*—Across the valley of the River Don between Sheffield and Conisborough. [Maps 82 N.W., 82 N.E., 87 S.W., 87 S.E. ; and 283, 284, 288, 289, 290, 295, 6-inch Yorkshire], by A. H. GREEN, 1873.
- 89\*—Across the Yorkshire Coalfield, from the N.W. of Sheffield by Ecclesfield, Wentworth, and through Snaith and Barlow. [Maps 82 N.W., 87 S.W., 87 S.E., 87 N.E., and 236, 237, 251, 264, 265, 276, 283, 288, 289, 293, 294, 6-inch Yorkshire], by A. H. GREEN, 1873.
- 90\*—From Ughill Moor, west of Sheffield, across the Yorkshire Coalfield, by Wharncliffe and Upton ; thence through Wentbridge, to the environs of Selby. [Maps 92 N.W., 87 S.W., 87 N.W., 87 N.E., 93 S.E., and 221, 235, 236, 250, 263, 264, 272, 282, 287, 288, 293, 6-inch Yorkshire], by A. H. GREEN, 1873.
- 91\*—No. 1, From the upper part of the Derwent to the centre of the Yorkshire Coalfield, across Broomhead and Whitwell Moors Darley Dale, and Houghton to Houghton

## SHEET

- Common. 2, From Hoyland, crossing the Coal-measures of Silkstone, Darton, Ackton, and Glasshoughton to Newton Colliery near Castleford. [Maps 81 N.E., 87 S.W., 87 N.W., 88 S.E., 1-inch ; and 234, 248, 249, 262, 273, 274, 275, 281, 282, 287, Yorkshire, 6-inch], by A. H. GREEN, 1875.
- 92\*—From Howden Moors, across the Yorkshire Coalfield by the north of Barnsley, by Byram, to the outskirts of Selby. [Maps 87 N.E., N.W., S.W., 88 S.E., 1-inch, 220, 221, 234, 235, 249, 262, 263, 273, 274, 280, 281, Yorkshire, 6-inch], by A. H. GREEN, and J. C. WARD, 1873.
- 93\*—From the northern end of the Saddleworth Valley, across the Yorkshire Coalfield by Wakefield and Sharlston to the north of Pontefract. [Maps 88 S.W., S.E., N.E., 87 N.W., 1-inch ; 234, 247, 248, 249, 259, 260, 261, 271, Yorkshire, 6-inch], by A. H. GREEN, J. R. DAKYNS, J. C. WARD, and R. RUSSELL, 1873.
- 94\*—From Marsden, west of Huddersfield, to Bolton Percy. [Maps 88 S.E., N.E., 87 N.W., 93 S.W., 1-inch ; 190, 205, 219, 220, 233, 234, 246, 247, 248, 259, 260, Yorkshire, 6-inch], by A. H. GREEN, J. R. DAKYNS, J. C. WARD, and R. RUSSELL, 1874.
- 95\*—From the Yorkshire Coalfield south of Bingley, across Oakenshaw, near Bradford, near Barnsley to the neighbourhood of Doncaster. [Maps 87 N.W., S.W., S.E., 88 N.E., 92 S.E., 1-inch ; 201, 216, 231, 232, 247, 248, 262, 263, 275, 276, Yorkshire, 6-inch], by A. H. GREEN, R. RUSSELL, and C. FOX-STRANGWAYS, 1873.
- 96\*—From the northern side of the Skipton Anticlinal, by Rumbles Moor, Baildon, Calverley Moor, Pudsey, Gildersome, and Dewsbury, to the neighbourhood of Felkirk, N.E. of Barnsley. [Maps 92 N.E., 92 S.E., 88 N.E., 87 N.W., 87 S.W., 1-inch ; 151, 168, 185, 186, 201, 202, 217, 232, 247, 248, 262, 263, Yorkshire, 6-inch], by A. H. GREEN, J. R. DAKYNS, J. LUCAS, R. RUSSELL, C. FOX-STRANGWAYS, and W. H. DALTON, 1876.
- 97\*—From Otley, across the Yorkshire Coalfield by Bramley to near Conisborough. [Maps 87 N.W., S.W., S.E.,

## SHEET

- 92 S.E., 93 S.W., 1-inch ; 187, 202, 217, 218, 233, 248, 249, 263, 275, 276, 284, 6-inch], by A. H. GREEN, J. C. WARD, J. LUCAS, and R. RUSSELL, 1873.
- 98\*—Across the Brimham Rocks, the Lower Coal Measures of Chapel Allerton and Leeds ; the Middle Coal-Measures of Osmondthorpe ; Middle Coal-Measures of Sharlston, to the neighbourhood of Havercroft. [Maps 87 N.W., 92 N.E., S.E., 93 S.W., 1-inch ; 136, 153, 170, 187, 188, 203, 218, 233, 234, 249, 263, Yorkshire, 6-inch], by A. H. GREEN, J. C. WARD, J. LUCAS, and R. RUSSELL, 1876.
- 99\*—From Gybdykes, north-east of Masham, across the Harrogate Anticlinal ; the Lower Coal-Measures of Seacroft, and the Middle Coal-Measures of Austhorpe, to the River Aire at Mickletown. [Maps 87 N.W., 93 N.W., S.W., 96 S.W., 97 S.E., 1-inch ; 101, 118, 119, 137, 154, 171, 188, 203, 218, 219, 234, Yorkshire, 6-inch], by J. C. WARD, J. LUCAS, C. FOX-STRANGWAYS, and R. RUSSELL, 1876.
- 100\*—From the neighbourhood of Boroughbridge to the Yorkshire Coalfield, by Boroughbridge, Knaresborough, Parlington Hollins, the Middle Garford, Sharlston and Nostel. [Maps 87 N.W., 93 N.W., S.W., 1-inch ; 138, 154, 155, 172, 189, 204, 219, 234, 249, 263, Yorkshire, 6-inch], by J. R. DAKYNS, J. C. WARD, C. FOX-STRANGWAYS, and R. RUSSELL, 1876.
- 101\*—From Blackstone Edge, near Todmorden, by North Dean, South of Halifax, Hunslet, Scholes, and Newton Kyme, to the Alluvial Flat of the River Wharfe. [Maps 87 N.W., 88 N.E., N.W., 93 S.W., 1-inch ; 188, 189, 190, 203, 204, 217, 218, 230, 231, 232, 244, 245, Yorkshire, 6-inch], by W. T. AVELINE, J. R. DAKYNS, J. C. WARD, and R. RUSSELL, 1875.
- 102—From Heptonstall Moors, north Todmorden, by Otley and Wharfedale ; the Harrogate anticlinal, to the neighbourhood of Knaresborough. [Maps 88 N.W., 92 S.E., 93 N.W., 1-inch ; 154, 155, 170, 171, 186, 187, 200, 201, 214, 215, Yorkshire, 6-inch], by J. R. DAKYNS, J. LUCAS, C. FOX-STRANGWAYS, and W. H. DALTON, 1874.

## SHEET

- 129—From Baildon Common, by Ilkley, Wharfedale, Greenhow Hill, and the Craven Fault, to Wensleydale. [Maps 97 S.W., S.E., 92 N.E., S.E., 1-inch; 66, 82, 83, 99, 116, 134, 151, 152, 169, 186, 201, Yorkshire, 6-inch], by J. R. DAKYNS, and C. FOX-STRANGWAYS, 1882.
- 130\*—From Staithes, through Whitby, across the Vale of Pickering to the Chalk of Willerby Wold. [Maps 95 S.W. N.W., 104 S.E., S.W., 1-inch; 19, 20, 32, 33, 47, 62, 77, 93, 109, Yorkshire, 6-inch], by C. FOX-STRANGWAYS and G. BARROW, 1883.
- 131\*—From Redcar, by Upleatham, Danby, Pickering Moors, and the Vale of Pickering to Knapton. [Maps 104 S.W., 96 N.E., 96 S.E., 95 S.W., 1-inch; 7A, 7, 17, 18, 30, 31, 45, 60, 75, 91, 92, 108, 125, Yorkshire, 6-inch], by C. FOX-STRANGWAYS, C. REID, and G. BARROW, 1883.
- 132\*—From the Tees at Middlesbrough by Eston, Easby Moor, and the Howardian Hills to Brandsby and Stillington. [Maps 93 N.E., 96 S.E., 103 S.E., 104 S.W., 1-inch; 6, 16, 17, 29, 43, 58, 73, 89, 105, 122, 140, Yorkshire, 6-inch], by C. FOX-STRANGWAYS and G. BARROW, 1883.
- 133\*—From Ferryhill across the Valley of the Tees, Whorlton, and Osmotherly Moors, to Easingwold. [Maps 93 N.W., 96 S.W., N.W., 103 S.E., N.E., 1-inch; 15, 27, 28, 42, 57, 72, 88, 104, 121, Yorkshire, 35, 43, 49, 50, 56, Durham, 6-inch], by H. H. HOWELL, C. FOX-STRANGWAYS, and G. BARROW 1884.
- 134\*—From Codbeck, east of Northallerton, across Black Hambleton, Rosedale, Egton, High Moor, to the Coast of Hawsker Bottoms, south of Whitby. [Maps 95 N.W., 96 N.E., 96 N.W., 1-inch; 32, 33, 45, 46, 56, 57, 58, 59, 60, 71, Yorkshire, 6-inch], by C. FOX-STRANGWAYS, C. REID, and G. BARROW, 1883.
- 135—From Upsall, across Boltby Moor, the Hambleton Hills, by Hackness and Seamer Moor, to Gristhorpe Bay. [Maps 95 N.W., S.W., 96 N.W., N.E., S.W., S.E., 1-inch; and 61, 62, 71, 72, 73, 74, 75, 76, 77, 93, 94, Yorkshire, 6-inch], by C. FOX-STRANGWAYS and G. BARROW, 1884.
- 136\*—From below Whitestone Cliff, across the Hambleton Hills, to the coast at Scarborough. [Maps 95 S.W.,

## SHEET

- 96 S.W., S.E., 1-inch ; and 74, 77, 78, 88, 89, 90, 91, 92, 93, Yorkshire, 6-inch], by C. FOX-STRANGWAYS, 1884.
- 137\*—From Knaresborough, across the Vale of York, and the Howardian Hills, the Vale of Pickering, to Robin Hood's Bay. [Maps 93 N.W., 95 N.W., 96 N.E., S.E., 1-inch ; 46, 47, 60, 61, 74, 75, 90, 105, 106, 121, 122, 138, 139, 155, Yorkshire, 6-inch], by C. FOX-STRANGWAYS and G. BARROW, 1884.
- 138\*—Sections illustrating the structure of the Oolites of Howardian Hills. Section A., From Hovingham Spa, across Terrington, and Stittenham to Flaxton. Section B., From Slingsby, across Castle Howard Park, to Barton-le-Willows. Section C., From Amotherby and Swinton, across Hildenley, Huttons-Ambo, and Westow, to Leppington. Section D., From Winteringham, along the edge of the Wolds by Settrington, North Grimston and Birdsall, to Water Dale and Kirkby Underdale. [Maps 93 N.E., 94 N.W., 95 S.W., 96 S.E., 1-inch ; and 105, 106, 123, 124, 125, 141, 142, 143, 159, Yorkshire, 6-inch], by C. FOX-STRANGWAYS, 1884.
- 139\*—Section along the Western Escarpment of the Wolds, illustrating the overlap of the Cretaceous Rocks, from the Oolites of Malton, Langton, Burythorpe, Leavening, Acklam, and Kirkby Underdale, across the Lias and the Keuper Marl of Bishop Wilton, Kildwick Percy, Londesborough, and MarketWeighton, to the Oolites of Sancton, Newbald, South Cave, and Brough on the Humber. [Maps 86, 93 N.E., S.E., 94 S.W., 96 S.E., and 124, 142, 159, 176, 193, 194, 209, 224, 238A, Yorkshire, 6-inch], by C. FOX-STRANGWAYS, 1884.
- 146—From Saddleworth, Rishworth Moor, by the Skipton Anticlinal, to near Grassington. [Maps 88 N.W., S.W., 92 S.E., N.E., 1-inch ; and 151, 168, 185, 200, 230, 245, 249, 271, Yorkshire, 6-inch], by J. R. DAKYNS, J. C. WARD, and W. H. DALTON, 1886.
- 147—Sections illustrating the Geology of the Country between Slaidburn and Ingleton (No. 1) ; and between Morecambe Bay and Settle (No. 2). [Maps 91 N.E., 92 N.W., 97 S.W., and 30, 31, 32, Lancashire, 6-inch ; 131, 132, 148, 165, Yorkshire, 6-inch], by R. H. TIDDEMAN, 1891.



**VERTICAL SECTIONS.**

SCALE 40 FEET TO AN INCH.

## SHEET

- 28—Carboniferous Rocks around Grassington Moor and Kettlewell. [Maps 92 N.E., 97 S.W., S.E., 1-inch; 97, 116, 134, Yorkshire, 6-inch], by J. R. DAKYNS, 1874.
- 30—Strata above the Barnsley Coal in the Southern part of the Yorkshire Coalfield. 1, Shireoaks. 2, Kiveton Park. 3, Holmes. 4, Thryberg Hall. 5, Swinton Park Gate. 6, Albany and Royal Oak. 7, Denaby Main. 8, Oaks. 9, Carlton Borings. [Maps 82 N.E., N.W., 87 S.W., S.E., 1-inch]; by A. H. GREEN, and R. RUSSELL, 1868.
- 31—Strata above the Barnsley Coal, in continuation of Sheet 30. 1, Norwood. 2, Aston. 3, Fence. 4, Orgreave. 5, Tinsley Park. 6, Pit at Rawmarsh. 6A, Boring at Rawmarsh. 7, Rainborough Pit. 8, Lund Hill. 9, Wombwell Main. 10, Part of a boring at Swaithe. Swaithe Main. 11, Pinder Oaks. 12, Mount Osborne. 13, Burton Bank. 14, Gawber New. [Maps 82 N.W., 87 S.W., 1-inch; 274, 275, 283, 289, 295, 299, 300, Yorkshire, 6-inch,] by A. H. GREEN, and R. RUSSELL, 1869.
- 32—Strata between the Barnsley and Silkstone Coals. 1, Reinshaw Park. 2, Intake. 3, Nunnery New. 4, Pitsmoor. 5, Garrow Tree Hill. 5A, Winterhill Ironstone Pit. 6, Greaves. 6A, Boring at Bradgate. 7, Fenton's. 8, Thorncliffe. 9, Warncliffe Silkstone. 10, New Sovereign. 11, Strafford Main. 12, Pit at Great Ings. 12A, Silkstone Fall. 13, Slack Hills. 13A, Church Lane. [Maps 82 N.W., 87 S.W., 1-inch; 274, 282, 288, 289, 294, 295, Yorkshire, 6-inch], by A. H. GREEN and R. RUSSELL, 1869.
- 35—Yorkshire Coalfield, between Penistone and Halifax. 1, Hoyland, Swaine, Penistone, and Hazlehead. 2, Bagden, Lower Cumberworth, High Flats, and New Mill. 3, Kirkburton, Highburton, and Mytholm Bridge. 4, Fenay Bridge and Huddersfield. 5, Brighouse and High Field Pit. 6, Norwood Green. Northowram, Halifax, and Catherine Slack. [Maps 88 S.E., and N.E.,

## SHEET

1-inch ; 216, 231, 246, 247, 260, 261, 272, 273, 274, 281, Yorkshire, 6-inch], by J. C. WARD, 1869.

- 36—Yorkshire Coalfield, Measures above the Barnsley Coal between Barnsley and Wakefield. 1, (a) Railway cutting at Blacker Hill. (b.) East Gawber Colliery, Barnsley. 2, (a.) Borehole near Royston. (b.) Dearne Side Colliery. 3, (a.) Borehole near Chevet Lane. (b.) Woolley Coal Company's Wheatley Wood Pit. 4, Crigglestone Cliff Collieries. 5, (a.) Bore-hole in Hallas Field, near Wakefield. (b.) Lupset Colliery, Wakefield. (c.) Roundwood Colliery, Wakefield. 6, Manor Colliery, Wakefield. 7, Bore-hole on Heath Common. 8, St. John's Colliery, Newlands. 9, Snyderdale Colliery. 10, Featherstone Colliery. [Maps 87 N.W., S.W., 1-inch, and 248, 249, 262, 274, Yorkshire, 6-inch], by A. H. GREEN, and T. V. HOLMES, 1870.

- 37—Yorkshire Coalfield, Measures between the Barnsley and Silkstone Coals between Barnsley and Wakefield. 1, (a.) Bore-hole at Gawber Hall Colliery. (b.) Higham Colliery. 2, (a.) Bore-hole at Briery Royds Colliery. (b.) Bore-hole at Darton. 3, Falconer Colliery. 4, (a.) Bore-hole near Snapethorpe. (b.) (c.) Bore-holes near Cawthorne. 5, Coals about West Clayton and High Hoyland. 6, Bore-hole near Emley. 7, (a.) Bore-hole on Bretton Common. (b.) Sinkings and Borings at Victoria Colliery, Netherton. 8, Hartley Bank Collieries. 9, Stanley Victoria Colliery. 10, West Riding Colliery. [Maps 87 N.W., S.W., 1-inch], 233, 234, 248, 261, 262, 274, Yorkshire, 6-inch], by A. H. GREEN, and T. V. HOLMES, 1870.

- 38—Yorkshire Coalfield, Measures above the Haigh Moor Coal, in the neighbourhood of Wakefield 1, Bore-hole at Victoria Mill, Ossett. 2, Roundwood Colliery, Wakefield. 3, Manor Colliery, Wakefield. 4, (a.) St. John's Colliery, Wakefield (b.) Newton Colliery, Wakefield. 5, Stanley Victoria Colliery. 6, West Riding Colliery. 7, Whitwood Collieries (a.) Bore-hole at Loscoe. (b.) Bore-hole. 8, Wheldale Colliery, Castleford. 9, Newton Colliery, Castleford. 10 Coals about Glass Houghton. [Map, 87 N.W., 1-inch ; 233, 234, 248, 249, Yorkshire, 6-inch], by A. H. GREEN, and T. V. HOLMES, 1871.

## SHEET

- 40—Strata between the Haigh Moor and Blocking Coals near Flockton and Leeds (Yorkshire). 1, Prince of Wales Pit, Flockton. 2, Engine Pit Emroyd. (a.) Boring, Hostingley Colliery. (b.) Hopton, Mirfield. 3, Saville Pit, Dewsbury. (a.) Bore-hole, No. 12, Soothill Estate (b.) Boring, Northfield House, Dewsbury. (c.) Boring near Red Lathe, Mirfield. (d.) Boring, Jackey Wood, near Heckmondwike. (e.) Boring, Hazel Grove, Denby Grange. 4, Boring, Cross Bank Colliery, Batley. (a.) Boring, Carlinghow, 5, Muffatt Lane Pit, White Lee Colliery. (a.) Boring, Little Gomersall Colliery. (b.) West Pit, Gomersall. (c.) Boring, Wentworth Colliery, Birstall. (d.) Boring, West Yorkshire Colliery, Birstall. 6, Street Pit, Gildersome. 7, No. 2 Pit, Victoria Colliery, Bruntcliffe. 8, Morley Main Colliery. 9, Engine Pit, West Ardsley Colliery. 10, West Pit, Middleton Colliery. (a.) No. 2 Pit, Beeston Manor Colliery. 11, Boring, Simpson's Spring. East Ardsley. 12, Cousin's Pit, Rothwell Haigh. (a.) Bye Pit, Rothwell Haigh. (b.) Victoria Pit, Rothwell Haigh. Boring, Swillington Bridge. [Maps 87 N.W., 88 N.E., 1-inch; 261, 247, 232, 233, 218, 219, Yorkshire, 6-inch.] by R. RUSSELL, 1871.
- 42—Yorkshire Coalfield. Measures between Huddersfield and Leeds. 1, Four Lane Ends, Addlecroft. 2, Boring at West side of Railway between Jill Lane and Tom Royd's House. 3, Boring at bottom of Engine Pit Dewsbury Moor. Strawberry Pit, Liversedge. (a.) Boring at Cleckheaton. 5, Green Lane Pit, Clifton. 6, High Moor Lane Pit, Clifton. 7, Well-sinking at Cleckheaton. (a.) Popplewell Pit, Scholes. (b.) Sinking at Popplewell. 8, Cleckheaton Engine Pit, Hunsworth Colliery. 9, No. 2 Pit, Hunsworth Colliery. 10, Westgate Hill, near Toll Bar. 11, No. 13 Pit, Broad-Oaks Colliery. 12, No. 4 Pit, Beeston Manor Colliery. (a.) Boring at Cross Flats, Beeston. 13, Engine Pit, Neville Hill Colliery [Maps 88 N.E., 87 N.W., 93 S.W., 1-inch; 247, 231, 232, 217, 218, Yorkshire, 6-inch], by R. RUSSELL, 1872.
- 43—Yorkshire Coalfield. Measures in the Halifax, Bradford, and Leeds districts. 1, Boring, Mirfield. 2, Boring,

## SHEET

Windy Bank. 3, Breaks Pit. (a.) Boring, near Breaks Pit. 4, First Mine Shaft, Lower Wike. 5, Upper Cow Close Pit, Wike. 6, Section in the Low Moor District. 7, Boring, Jaggar Park Wood, near Shelf. 8, Boring, Queenshead, near Bradford. (a.) Average Section in the Queenshead, Thornton, and Manningham Districts. 9, Foot Road Pit, Parkside, West Bowling, near Bradford. 10, Bowling Iron Works. 11, Boring at Mr. Garnett's Mill Bradford Moor. 12, No. 1 Pit, Tong. 13, Boring at Westgate Hill. 14, Charles Pit, Tong. (a.) Boring, Rawden. (b.) Average Section in the Calverley, Horsforth, and Rawden Districts. [Maps 88 N.E., 92 S.E.; 247, 231, 216, 217, Yorkshire, 6-inch], by R. RUSSELL, and T. V. HOLMES. 1872.

44—Yorkshire Coalfield Measures in the Bradford and Leeds Districts. 1, Booth Holme Field Colliery, Tong. 2, N. Pit, Tong. 3, Mill Pit, Tong. 4, Sowden Air Pit. 5, Boring, Fleece Inn, Curwell. 6, No. 10 Pit, Beeston Manor Colliery. 7, No. 2 Pit, Beeston Manor Colliery. 8, Boring at Beeston. 9, Boring, Dragon Pit, Wortley. 10, Air Pit, Moggey Field, Wortley. 11, Lane Pit, Wortley. 12, Boring, Wellhouse Foundry, Leeds. 13, Boring, Union Foundry, Leeds. 14, Brewery, South Brook Street, Leeds. 15, Boring, Dye Works, East Street, Leeds. 16, Boring, Merrion Square Mill, Leeds. 17, Oriental Baths, Cookridge Street, Leeds. 18, Boring, St. Peter's Hill, Burley Road, Leeds. 19, No. 2 Boring, Green Farm, Leeds. 20, Gibraltar Colliery, Hunslet, near Leeds. 21, Dame Pit, Waterloo Main Colliery. 22, Nursery Pit, Waterloo Main Colliery. 23, Boring, Killingbeck Park, near Leeds. 24, Boring near Crossgates. 25, Victoria Pit, Manston. 26, Boring, North Side of Fox Wood, Seacroft. 26A, Average Section in the district North of Leeds. [Maps 87 N.W., 88 N.E., 93 S.W.; 217, 218, 203, Yorkshire, 6-inch], by J. C. WARD and R. RUSSELL, 1872.

45—Yorkshire Coalfield. 1, Boring in Soothill Estate. 2, Newhall Colliery, Middleton, near Leeds. 3, Bye Pit, Rothwell Haigh Colliery, near Leeds. 4, Newmarket

## SHEET

Colliery, Methley. 5, Hool Wood Pit. 6, Boring, Little Cross Holme, Allerton Bywater, near Leeds. 7, Boring at Fairburn. 8, Boring at Fairburn. 10 and 11, Boring at Kippax. 12, Boring at Billy Wood, Kippax. 13, Borings at Westfield Lamb Bridge, Kippax. 14, Carforth Bridge, near Leeds. 15, Boring at Colton, near Leeds. 16, Bye Pit. West Yorkshire Colliery, Austhorpe. 17, Boring near Micklefield. 18, Boring at Micklefield. [Maps 87 N.W., 93 S.W., 1-inch; 218, 219, 232, 233, 234, 235, Yorkshire, 6-inch], by J. C. WARD and R. RUSSELL, 1873.

- 67—Oolites of the Yorkshire Coast, from Filey to Cloughton. [Maps, 95 N.W., 95 S.W., 1-inch; and 62, 78, 94, Yorkshire, 6-inch], by C. FOX-STRANGWAYS and R. ETHERIDGE, 1879.

## MAPS—SCALE 6 INCHES TO A MILE.

Those marked thus \* are published, the others are in MS., and are deposited in the Geological Survey Library for reference, with the exception of those marked thus †.

*In the earlier stages of the Survey of the Yorkshire Coalfield and of the surrounding area, the Drift was not mapped and is not shown either on the published maps or on the M.S. copies deposited in the Library of the Geological Survey. In such cases the words "Solid only" are added at the end of each of the following entries.*

*Some whole-sheet maps have been replaced by quarter sheets with a newer topography. Copies of smaller areas can thus be obtained and in some cases a drift copy has been made of some areas when it could not be made for the whole sheet.*

## SHEET

- 1—Cronkley Fell, by W. GUNN and C. T. CLOUGH. 1877.
- 2—Holwich, Lune Moor, by W. GUNN, 1877.
- 3\*—Lune Forest, by W. GUNN, 1872-75; pub. 1892.
- 4—Mickleton, by W. GUNN, 1871.
- 5\*—Romaldkirk, Cotherstone, by W. GUNN, 1871; pub. 1879.
- 6—Middlesbrough, by A. C. G. CAMERON and G. BARROW, 1878.
- 7\*—Redcar, by G. BARROW, 1877; pub. 1881.

## SHEET

- 7a—Redcar Scars, by G. BARROW, 1880.  
8\*—Saltburn, by G. BARROW, 1877 ; pub. 1888.  
9\*—Rockliff, N.W. of Staithes, by G. BARROW, 1878.  
10—Stainmoor Common, by W. GUNN, 1875.  
11\*—Cotherstone Moor, Bowes Moor, by W. GUNN, 1872-1875 ;  
pub. 1892.  
12\*—Bowes, Lartington, by W. GUNN, 1879.  
13\*—Wycliffe, by W. GUNN, 1878.  
14—Cleasby, Pierce Bridge, by W. GUNN, 1875.  
15—Yarm, South Stockton, by A. C. G. CAMERON, 1877.  
16—Ormesby, Normanby, Stainton, by A. C. G. CAMERON  
and G. BARROW, 1878.  
17\*—Guisborough, by G. BARROW, 1888.  
18—Skelton, Lofthouse, by G. BARROW, 1879.  
19\*—Hinderwell, Staithes, Runswick, by G. BARROW, 1899  
20\*—Lythe, by G. BARROW, 1879.  
21—Nine Standards, by J. G. GOODCHILD, 1878. Revised by  
G. BARROW, 1882.  
22—Stainmoor Forest, Bowes Moor, by W. GUNN and G.  
BARROW, about 1882.  
23—Scargill, by W. GUNN and G. BARROW, 1883.  
24\*—Kirkby Ravensworth, by W. GUNN, 1878.  
25\*—Aldborough, Melsonby, Barton, by W. GUNN, 1879.  
26—Croft, by W. GUNN and A. C. G. CAMERON, 1879.  
27—Crathorne, Kirk Levington, by A. C. G. CAMERON, 1878.  
28—Rudby, Stokesley, by A. C. G. CAMERON, 1878.  
29—Ayton, Kildale, by C. REID and G. BARROW, 1879.  
30—Castleton, Danby Moor, by C. REID and G. BARROW, 1880.  
31—Ugthorpe, Lealholm Bridge, by C. REID and G. BARROW,  
1879.  
32\*—Whitby, by G. BARROW, 1880  
33\*—Hawsker Bottoms, by G. BARROW, 1878.  
34—Ugill Rigg, by T. Mc. K. HUGHES ; Drift by A. STRAHAN,  
1884.  
35—Birkdale Common, Ravenseat Moor, by J. R. DAKYNS  
and G. BARROW, 1883.  
36—Angram, Stonesdale Moor, Melbecks Moor, by C. T.  
CLOUGH, and G. BARROW, 1883.  
37—Reeth, by W. GUNN and G. BARROW, 1883.

## SHEET

- 38\*—Marske, by W. GUNN, 1878.
- 39\*—Richmond, Middleton Tyas, by W. GUNN, 1879.
- 40—East Cowton, by W. GUNN and A. C. G. CAMERON, 1879.
- 41—East Harlsey, by A. C. G. CAMERON and G. BARROW, 1880.
- 42—Kirkby, Whorlton, by A. C. G. CAMERON and G. BARROW, 1880.
- 43—Urra, Ingleby Greenhow, by C. REID and G. BARROW, 1880.
- 44—Danby Dale, Fryup Dale, by C. REID, 1879.
- 45—Egton, Glaisdale, Grosmont, by C. REID and G. BARROW, 1878.
- 46\*—Sleight's Moor, Fylingdales Moor, by G. BARROW, 1879.
- 47\*—Robin Hood's Bay, by G. BARROW, 1879.
- 48—Howgill, by T. MC K. HUGHES and A. STRAHAN, 1885.
- 49—St. Marks, Baugh Fell, by T. MC K. HUGHES, R. RUSSELL, A. STRAHAN, R. H. TIDDEMAN, C. T. CLOUGH, G. BARROW, 1885.
- 50—Cotterdale, by J. R. DAKYNS and C. E. DE RANCE, 1883.  
Solid only.
- 51—Muker, by C. T. CLOUGH, C. E. DE RANCE, 1885.
- 52—Grinton, Swaledale, by W. GUNN, 1885.
- 53\*—Downholme, by W. GUNN, 1879.
- 54—Catterick, by W. GUNN, 1875.
- 55—Kirkby Fleetham, Danby Wiske, by W. GUNN and A. C. G. CAMERON, 1881.
- 56—Northallerton, by A. C. G. CAMERON and G. BARROW, 1881.
- 57—Whorlton Moor, by C. FOX-STRANGWAYS and G. BARROW, 1881.
- 58—Rutland Moor, Bilsdale, by C. FOX-STRANGWAYS, C. REID, and G. BARROW, 1880.
- 59—Rosedale Abbey, by C. REID, 1881.
- 60—Pickering Moors, by C. FOX-STRANGWAYS and C. REID, 1881.
- 61—Wykeham High Moor, Fylingdales Moor, by C. FOX-STRANGWAYS, 1876.
- 62\*—Cloughton, Harwood-dale, Staintondale, by C. FOX-STRANGWAYS, 1879.
- 63—Sedbergh, by T. MC K. HUGHES and A. STRAHAN, 1885.
- 64—Dent, Bow Fell, by T. MC K. HUGHES, A. STRAHAN and G. BARROW, 1884.

## SHEET

- 65—Hawes, by C. FOX-STRANGWAYS, C. T. CLOUGH, and A. STRAHAN, 1883.
- 66—Askrigg, Bainbridge, by J. G. GOODCHILD and J. R. DAKYNS, 1880.
- 67—Aysgarth, by J. R. DAKYNS, W. H. DALTON and W. GUNN, 1871.
- 68\*—Leyburn, by J. LUCAS, W. GUNN, and W. H. DALTON, 1880.
- 69—Patrick Brompton, by W. GUNN and J. LUCAS, 1872.
- 70—Bedale, Leeming, Ainderly Steeple, by A. C. G. CAMERON, 1880.
- 71—South Otterington, Borrowby, by H. H. HOWELL, A. C. G. CAMERON, and G. BARROW, 1881.
- 72—Kirkby Knowle, Kepwick, Hawnby, by C. FOX-STRANGWAYS and G. BARROW, 1880.
- 73—Helmsley Moor, Kirkdale Moor, by C. FOX-STRANGWAYS and G. BARROW, 1881.
- 74—Lastingham, Gillamoor, by C. FOX-STRANGWAYS and C. REID, 1881.
- 75—Levisham, Cropton, Newton Dale, by C. FOX-STRANGWAYS, 1876.
- 76—Allerston Low Moor, Lockton Low Moor, by C. FOX-STRANGWAYS, 1876.
- 77\*—Scalby, Hackness, by C. FOX-STRANGWAYS, 1878.
- 78\*—Scarborough, by C. FOX-STRANGWAYS, 1878.
- 79—Moors West of Whernside, by A. STRAHAN, 1883.
- 80—Whernside, by J. R. DAKYNS and A. STRAHAN, 1884.
- 81—Cam Fell, Dod Fell, by J. R. DAKYNS, and C. FOX-STRANGWAYS, 1883.
- 82\*—Kidstones, Bishopdale, by J. R. DAKYNS, 1871; pub. 1879.
- 83\*—Carlton, by J. R. DAKYNS and 1871; pub. 1878.
- 84\*—East Witton, by J. LUCAS and W. H. DALTON, pub. 1879.
- 85—Masham, Jervaulx Abbey, by J. LUCAS, 1881.
- 86—Pickhill, Kirklington, Well, by A. C. G. CAMERON, 1881.
- 87—Thirsk, by A. C. G. CAMERON and G. BARROW, 1881.
- 88—Feliskirk, Hambleton Hills, by C. FOX-STRANGWAYS and G. BARROW, 1881.
- 89—Helmsley, by C. FOX-STRANGWAYS, 1877.



## SHEET

- 90—Normanby, Kirkby Moorside, Sinnington, by C. FOX-STRANGWAYS, 1877.
- 91—Pickering, by C. FOX-STRANGWAYS, 1877.
- 92—Ebberston, Allerston, by C. FOX-STRANGWAYS, 1877.
- 93\*—Brompton, Seamer, by C. FOX-STRANGWAYS, 1878.
- 94\*—Gristhorpe, Cayton Bay, by C. FOX-STRANGWAYS, 1878.
- 95—Thornton in Lonsdale, by T. MC K. HUGHES, and R. H. TIDDEMAN, 1881.
- 96—Ingleton, Ingleborough, by R. H. TIDDEMAN and C. FOX-STRANGWAYS, 1884.
- 97\*—Foxup, Halton Gill, by T. MC K. HUGHES, J. R. DAKYNS, and W. H. DALTON, 1871 ; pub. 1879.
- 98\*—Buckden, by J. R. DAKYNS and W. H. DALTON, 1870 ; pub. 1878.
- 99\*—Little Whernside, Nidderdale, by J. R. DAKYNS, and J. LUCAS, pub. 1879.
- 100\*—Lofthouse, Masham Moor, by J. LUCAS, 1875.
- 101—Kirkby Malzeard, by J. LUCAS, 1877-1880.
- 101—Kirkby Malzeard, by J. LUCAS, 1877 ? \*
- 102—Wath, West Tanfield, by H. H. HOWELL and A. C. G. CAMERON, 1881.
- 103—Topcliffe, by A. C. G. CAMERON and G. BARROW, 1880.
- 104—Great Thirkleby, Coxwold, by C. FOX-STRANGWAYS, and G. BARROW, 1880.
- 105—Ampleforth, Gilling, by C. FOX-STRANGWAYS, 1878.
- 106—Slingsby, Hovingham, Nunnington, by C. FOX-STRANGWAYS, 1879.
- 107—Kirkby Misperton, by C. FOX-STRANGWAYS, 1877.
- 108—Yedingham, Scampston, by C. FOX-STRANGWAYS, 1874.
- 109—Sherburn, Ganton, by C. FOX-STRANGWAYS, 1874.
- 110—Filey, Hunmanby, by C. FOX-STRANGWAYS, 1873.
- 111—Speeton Cliff, by C. FOX-STRANGWAYS, 1873.
- 112—Bentham, by R. H. TIDDEMAN, 1871-1877. Solid only.
- 113—Clapham, by W. GUNN and R. H. TIDDEMAN, 1883.
- 114—Horton in Ribblesdale, Great Stainforth, Fountain Fell, by W. GUNN and R. H. TIDDEMAN ? 1883. Drift in West only.
- 115\*—Kettlewell, Arncliffe, Malham Tarn, by J. R. DAKYNS and W. H. DALTON, 1870 ; pub. 1878.

## SHEET

- 116\*—Conistone Moor, by J. R. DAKYNS and J. LUCAS, 1878.  
Solid only.
- 117—Ramsgill, Nodderdale, by J. LUCAS, 1871. Solid only.
- 118—Sawley, Laverton, by J. LUCAS, 1878.
- 119—Ripon, by C. FOX-STRANGWAYS, 1870 and A. G. CAMERON, 1879.
- 120—Brafferton, by C. FOX-STRANGWAYS and A. C. CAMERON, 1879.
- 121—Easingwold, by C. FOX-STRANGWAYS, 1878.
- 122—Stillington, Crambe, Brandsby, by C. FOX-STRANGWAYS, 1878.
- 123—Castle Howard, by C. FOX-STRANGWAYS, 1879.
- 124—Malton, by C. FOX-STRANGWAYS, 1879.
- 125—Wintringham, Thorpe Basset, by C. FOX-STRANGWAYS, 1873.
- 126—Foxholes, Weaverthorpe, by C. FOX-STRANGWAYS, 1873.
- 127—Wold Newton, North Burton, by C. FOX-STRANGWAYS, 1873.
- 128—Flamborough, Speeton, by C. FOX-STRANGWAYS, 1873.
- 129—Flamborough Head, by C. FOX-STRANGWAYS, 1873.
- 130—Moors near Bentham and Slaidburn, by R. H. TIDDEMAN, 1881.
- 131—Turnerford, Burn Moor west of Settle, by R. H. TIDDEMAN, 1881.
- 132—Settle, by R. H. TIDDEMAN, 1881.
- 133—Kirkby Malham, by W. H. DALTON, 1878; revised by R. H. TIDDEMAN, 1886.
- 134—Grassington, by J. R. DAKYNS, 1870. Revised by R. H. TIDDEMAN, 1884.
- 135—Pateley Bridge, by J. R. DAKYNS and J. LUCAS, 1869.
- 136—Dacre Banks, Brimham Rocks, by J. LUCAS, and C. FOX-STRANGWAYS, 1871. Revised 1889.
- 137—Copgrove, by C. FOX-STRANGWAYS, 1871.
- 138—Boroughbridge, by C. FOX-STRANGWAYS, 1871.
- 139—Alne, by C. FOX-STRANGWAYS, 1871.
- 140—Sheriff Hutton, Sutton on the Forest, by C. FOX-STRANGWAYS, 1872.
- 141—Bulmer, Kirkham Abbey, by C. FOX-STRANGWAYS, 1879.
- 142—Langton, Westow, Acklam, by C. FOX-STRANGWAYS, 1879.

## SHEET

- 143—Sledmere, Wharram le Street, by J. R. DAKYNS, and C. FOX-STRANGWAYS, 1880.
- 144—Langtoft, by J. R. DAKYNS, 1880.
- 145—Kilham, by J. R. DAKYNS, 1880.
- 146—Bridlington, by J. R. DAKYNS, 1880.
- 147—Bowland Forest, by W. T. AVELINE and R. H. TIDDEMAN, 1883. Solid only.
- 148—Stocks in Bowland, Gisburn Forest, by R. H. TIDDEMAN, 1871. Solid only.
- 149—Long Preston, by R. H. TIDDEMAN, 1871. Solid only.
- 150—Gargrave, by R. H. TIDDEMAN, 1891. Solid only.
- 151\*—Drebley, Appletreewick, Barden Moor, Eastby, by J. R. DAKYNS, 1869. Drift edition by R. H. TIDDEMAN, 1905.
- 152\*—Blubberhouses, by J. R. DAKYNS and J. LUCAS, 1878. Solid only. Drift M.S., 1908.
- 153—Hampsthwaite, by J. LUCAS and C. FOX-STRANGWAYS, 1870. Solid only.
- 154—Knaresborough and Harrogate, by J. C. WARD and C. FOX-STRANGWAYS, 1871.
- 155—Goldsborough, Allerton, by C. FOX-STRANGWAYS, 1869.
- 156—Moor Monkton, Newton on Ouse, Kirk Hammerton, Shipton, by J. R. DAKYNS and C. FOX-STRANGWAYS, 1871.
- 157—Skelton, Huntington, Saxby, Strensall, by C. FOX-STRANGWAYS, 1872.
- 158—Upper Helmsley, Stockton on the Forest, Stamford Bridge, by C. FOX-STRANGWAYS, 1872.
- 159—Bugthorpe, Kirkby Underdale, by C. FOX-STRANGWAYS, 1880.
- 160—Wetwang, Huggate, by J. R. DAKYNS, 1881.
- 161—Driffild, by J. R. DAKYNS, 1880.
- 162—Lowthorpe, Nafferton, by J. R. DAKYNS, 1881.
- 163—Barmston, Ulrome, by J. R. DAKYNS and C. REID, 1881.
- 164—Forest of Bowland, by R. H. TIDDEMAN, 1868.
- 165—Slaidburn, by R. H. TIDDEMAN and J. SHELSWELL, 1868.
- 166—Gisburn, by R. H. TIDDEMAN, W. GUNN and J. SHELSWELL, 1871.
- 167—Broughton in Craven, by W. GUNN, 1870.
- 168†—Skipton, by C. FOX-STRANGWAYS and W. H. DALTON, 1868.

## SHEET

- 169—Denton, by C. FOX-STRANGWAYS, 1868.
- 170—Fewston, by J. C. WARD, J. LUCAS and C. FOX-STRANGWAYS, 1868.
- 171—Pannal, Spofforth, by J. LUCAS. 1869. Solid only.
- 172—Kirk Deighton, Wetherby, Cowthorpe, by W. T. AVELINE, J. R. DAKYNS, and C. FOX-STRANGWAYS, 1869.
- 173—Rufforth, Tockwith, by J. R. DAKYNS, 1872. Drift boundaries added, 1908.
- 174—York, by J. R. DAKYNS and C. FOX-STRANGWAYS, 1872. Drift edition, 1882.
- 175—Dunnington, Wilberfoss, by C. FOX-STRANGWAYS, 1872.
- 176—Pocklington, Fangfoss, by C. FOX-STRANGWAYS, 1880.
- 177—North Dalton, Warter, by J. R. DAKYNS and C. FOX-STRANGWAYS, 1881.
- 178—Cranswick, Bainton, by J. R. DAKYNS, 1881.
- 179—Beeford, North Frodingham, by J. R. DAKYNS, 1881.
- 180—Skipsea, Atwick, by J. R. DAKYNS, 1881.
- 181—Forest of Bowland, by R. H. TIDDEMAN, 1873.
- 182—Waddington, Grindleton, by R. H. TIDDEMAN, 1873.
- 183—Barnoldswick, by R. H. TIDDEMAN and W. GUNN, 1870. Revised 1873.
- 184\*—Dale End, Kelbrook, Thornton in Craven, by W. GUNN, 1872. Solid only.
- 185\*—Kildwick, Airedale, by J. R. DAKYNS and C. FOX-STRANGWAYS, 1878. Solid only.
- 186—Ilkley, by C. FOX-STRANGWAYS, 1869. Solid only.
- 187—Otley, by J. C. WARD and J. LUCAS, 1872. Solid only.
- 188—Harewood, by W. T. AVELINE, J. C. WARD, and J. LUCAS, 1870. Solid only.
- 189—Wetherby, by W. T. AVELINE, J. R. DAKYNS, J. C. WARD, and J. LUCAS, 1870. Solid only.
- 190—Tadcaster, by J. R. DAKYNS, 1870.
- 191—Naburn, Escrick, by J. R. DAKYNS and A. C. G. CAMERON, 1880 ; Drift, 1882.
- 192—Elvington, Sutton on Derwent, Weldrake, by A. C. G. CAMERON, 1880.
- 193—Everingham, Nunburnholme, by C. FOX-STRANGWAYS and A. C. G. CAMERON, 1880.
- 194—Londesborough, Goodmanham, by J. R. DAKYNS, and C. FOX-STRANGWAYS, 1881.

## SHEET

- 195—Lockington, by J. R. DAKYNS, 1880.  
196—Catwick, Brandesburton, by J. R. DAKYNS, 1880.  
197—Hornsea, by C. REID, 1881.  
198—Great Mitton, by W. T. AVELINE, ?  
199—Wadsworth Moor, by W. GUNN, 1869.  
200\*—Keighley, by J. R. DAKYNS and W. H. DALTON, 1878.  
Solid only.  
201\*—Bingley, by J. LUCAS, C. FOX-STRANGWAYS, and W. DALTON, 1871. Solid only.  
202\*—Calverley, Kirkstall, by J. C. WARD, J. LUCAS, and R. RUSSELL, 1878. Solid only.  
203\*—Seacroft, Chapel Allerton, Headingley, Leeds, by W. T. AVELINE, J. C. WARD, R. RUSSELL, and J. LUCAS, 1873.  
Solid only.  
204\*—Aberford, by W. T. AVELINE, J. R. DAKYNS, and J. C. WARD, 1871. Revised 1874. Solid only.  
205—Bolton Percy, by J. R. DAKYNS, 1870.  
206—Cawood, Stillingfleet, Riccall, by J. R. DAKYNS, and A. C. G. CAMERON, 1880.  
207—Skipwith, Ellerton, Bubwith, by A. C. G. CAMERON, 1880.  
208—Seaton Ross, Holme on Spalding Moor, by A. C. G. CAMERON, 1880.  
209—Market Weighton, by C. FOX-STRANGWAYS, 1881.  
210—Walkington, Beverley, by J. R. DAKYNS, 1880.  
211—Waghen, Long Riston, by J. R. DAKYNS, 1880.  
212—Withernwick, by C. REID, 1881.  
213—Aldborough, by C. REID, 1881.  
214—Heptonstall Moor, Wadsworth Moor, by J. R. DAKYNS, 1869 ?  
215\*—Denholme, by J. R. DAKYNS, J. C. WARD, C. FOX-STRANGWAYS and W. H. DALTON, 1878. Solid only.  
216\*—Bradford, by J. C. WARD, J. LUCAS, and C. FOX-STRANGWAYS, 1875. Solid only.  
217\*—Pudsey, by J. C. WARD, J. LUCAS, and R. RUSSELL 1875. Solid only.  
218\*—Leeds, by J. C. WARD and R. RUSSELL, 1875. Solid only.  
219\*—Kippax, Church Garforth, by W. T. AVELINE, J. C. WARD and R. RUSSELL, 1876. Solid only.  
220—Sherburn, by J. R. DAKYNS, 1871.

## SHEET

- 221—Selby, by J. R. DAKYNS and A. C. G. CAMERON, 1882.  
222—Wressle, Hemingbrough, by A. C. G. CAMERON, 1881.  
223—Eastrington, by A. C. G. CAMERON, 1881.  
224—North Cave, by C. FOX-STRANGWAYS, 1881.  
225—Cottingham, Skidby, Kirk Ella, by J. R. DAKYNS, 1880.  
226—Cottingham, by J. R. DAKYNS, 1880.  
227—Sproatley, Preston, by C. REID, 1881.  
228—Tunstall, Roos, by C. REID, 1881.  
229—Todmorden, by J. R. DAKYNS, 1870. Solid only.  
230—Sowerby Bridge, by J. R. DAKYNS, 1869. Solid only.  
231\*—Halifax, by J. R. DAKYNS, 1874. Solid only.  
232\*—Birstal, Heckmondwike, by R. RUSSELL, 1873. Solid only.  
233\*—East Ardsley, Rothwell, by A. H. GREEN, R. RUSSELL, and T. V. HOLMES, 1876. Solid only.  
234\*—Castleford, by W. T. AVELINE, A. H. GREEN, R. RUSSELL, and T. V. HOLMES, 1876. Solid only.  
235—Brotherton, by W. T. AVELINE, 1872.  
236—Carlton, by W. T. AVELINE, 1872.  
237—Howden, Goole, by A. C. G. CAMERON, 1881.  
238—Blacktoft, Saltmarshe, Hook, by A. C. G. CAMERON, 1881.  
238A—Brough, by C. FOX-STRANGWAYS and A. C. G. CAMERON, 1881.  
239—Welton, North Ferriby, Hessle, by C. FOX-STRANGWAYS and A. C. G. CAMERON, 1881.  
240—Hull, by A. C. G. CAMERON, 1881.  
241—Hedon, by A. C. G. CAMERON and C. REID, 1881.  
242—Winestead, by C. REID, 1881.  
243—Hollym, Withernsea, by C. REID, 1881.  
244—Blackstone Edge, by J. R. DAKYNS, 1870. Solid only.  
245—Riponden, by J. R. DAKYNS, 1869. Solid only.  
246\*—Huddersfield, by J. R. DAKYNS, J. C. WARD, and R. RUSSELL, 1871. Solid only.  
247\*—Dewsbury, by A. H. GREEN, J. C. WARD, and R. RUSSELL 1876. Solid only.  
248\*—Wakefield, by A. H. GREEN, 1875. Solid only.  
249\*—Pontefract, by W. T. AVELINE, A. H. GREEN, and T. V. HOLMES, 1875. Solid only.  
250\*—Darrington, Whitley, Little Smeaton, Womersley, by

## SHEET

- W. T. AVELINE, A. H. GREEN, and T. V. HOLMES, 1875.  
Solid only.
- 251—Snaith, copy made in 1912.
- 252—Goole Moor or Waste, by A. C. G. CAMERON, 1881.
- 253—Adlingfleet, Swinefleet, by A. C. G. CAMERON, 1881.
- 254—Trent Fall, by A. C. G. CAMERON, 1881.
- 255—Salthaugh Grange, by A. C. G. CAMERON, 1881.
- 256—Patrington, by C. REID, 1882.
- 257—Skeffling, Easington, by C. REID, 1881.
- 258—Bowstead Edge, Part in Yorkshire, by E. HULL, 1861.  
Solid only.
- 259—Marsden, by J. R. DAKYNS, 1870. Solid only.
- 260\*—Honley, by J. R. DAKYNS and J. C. WARD, 1871. Solid only.
- 261\*—Kirkburton, by A. H. GREEN, J. C. WARD, and R. RUSSELL, 1875. Solid only.
- 262\*—Darton, Royston, and West Bretton, by A. H. GREEN, 1874. Solid only.
- 263\*—Hemsworth, by A. H. GREEN, 1875. Solid only.
- 264\*—Campsall, Askern, by W. T. AVELINE and A. H. GREEN, 1875. Solid only.
- 265—Fishlake. Copy of northern half made in 1912.
- 266—Thorne, by A. C. G. CAMERON, 1881.
- 267—Crowle Moor, by A. C. G. CAMERON, 1881.
- 268—Sunk Island, by A. C. G. CAMERON, 1881.
- 269—Kilnsea, Spurn Head, by C. REID, 1881.
- 269A—Spurn Point, by C. REID, 1881.
- 270†—
- 271—Saddleworth, by J. R. DAKYNS, 1870.
- 272\*—Holmfirth, by J. R. DAKYNS and J. C. WARD, 1871.  
Solid only.
- 273\*—Penistone, by A. H. GREEN, J. R. DAKYNS, and J. C. WARD, 1871. Solid only.
- 274\*—Barnsley, by A. H. GREEN and J. C. WARD, 1871. Solid only.
- 275\*—Darfield, Cudworth, by A. H. GREEN and R. RUSSELL, 1875. Solid only.
- 276\*—Brodsworth, by W. T. AVELINE and A. H. GREEN, 1876.  
Solid only.
- 277—Doncaster, by W. T. AVELINE, 1862, incomplete.

## SHEET

- 278—Hatfield Chase, by A. C. G. CAMERON, 1881.
- 279—Blindstone Moss S.E. of Saddleworth, by E. HULL, 1871.  
Solid only.
- 280—Woodhead, Howden Moors, by J. R. DAKYNS, 1870.  
Solid only.
- 281\*—Longsett, Midhopstones, by A. H. GREEN, J. R. DAKYNS,  
and J. C. WARD, 1871. Solid only.
- 282\*—Wortley, Deep Car, by A. H. GREEN, J. R. DAKYNS,  
J. C. WARD, and T. V. HOLMES, 1873. Solid only.
- 283\*—Wath upon Dearne, Swinton, by A. H. GREEN and R.  
RUSSELL, 1875.
- 284\*—Mexborough, Conisborough, by W. T. AVELINE and A. H.  
GREEN, 1875. Solid only.
- 285—Doncaster. Copy of all but north-west quarter made 1912.
- 286—Finningley. Incomplete.
- 287\*—Low Bradfield, N.W. of Sheffield, by A. H. GREEN, C. LE  
NEVE FOSTER and J. R. DAKYNS, 1869. Solid only.
- 288\*—Ecclesfield, Oughtibridge, and Wadsley, by A. H. GREEN,  
J. C. WARD and T. V. HOLMES, 1874. Solid only.
- 289\*—Rotherham, by A. H. GREEN, R. RUSSELL, and T. V.  
HOLMES, 1876.
- 290\*—Wickersley, Braithwell, by W. T. AVELINE, A. H. GREEN,  
and T. V. HOLMES, 1875. Solid only.
- 291†—Tickhill.
- 292†—
- 293\*—Hallam Moors, by A. H. GREEN and C. LE NEVE FOSTER,  
1869. Solid only.
- 294\*—Sheffield, by A. H. GREEN and T. V. HOLMES, 1876.  
Solid only.
- 295\*—Handsworth, Attercliffe, Whiston, Woodhouse, by A. H.  
GREEN and T. V. HOLMES, 1875. Solid only.
- 296\*—Loughton en le Morthen, North Anston, by W. T.  
AVELINE, A. H. GREEN and T. V. HOLMES, 1875. Solid  
only.
- 297†—
- 298†—Mill Houses.
- 299\*—Wales Common, by A. H. GREEN and T. V. HOLMES.  
1875. Solid only.
- 300\*—Harthill, South Anston, by W. T. AVELINE, A. H. GREEN,  
and T. V. HOLMES, 1875. Solid only.



## NOTE TO INDEX

**I**N the following index, the names of authors of papers, etc., are printed in small capitals, thus : ' W. CAMDEN,' but titles of Journals, Proceedings, etc., the scientific names of fossils, and the names of places\* in which a work has been published, are printed in italics. Names of localities mentioned in the papers are printed in ordinary type. Thus the following entry in the Bibliography would be indexed in the same style of type used in the title : ' M. SIMPSON, Notes on *Ammonites communis*, in the Lias at Whitby. *Proc. Yorks. Geol. Soc.*, vol. I., No. 1. *Leeds*.'

In the case of anonymous articles (ANON.) and all works published in *London*, examples of which occur on most of the pages, no reference has been made either to ' Anon.' or ' *London* ' in the index, though the gist of the items is, of course, indexed as usual.

It is perhaps as well to bear in mind that any references to pages after 476, refer to the localities on, and authors of, the geological survey maps and sections.

\* This will be appreciated by those interested in topographical bibliography.

# INDEX

- A——, H. A., 209  
 Abandoned Mines, List of, 291  
     Plans, 276, 281, 301  
 ABBS, H. C., 220  
 ABEL, F., 91, 188  
 Aberdeenshire, Cretaceous, 297, 298, 305  
 Aberford, Map, 499  
 Abnormal *Spirifera*, 259  
 'About Yorkshire,' 267  
*Abstracts of Proceedings Geol. Soc.*, 352,  
     423, 435, 436, 448, 458, 467  
*Acanthothyris*, 221  
     " *crossi*, 221  
     " *senticosa* var. *fileyensis*,  
         221  
     " *spinosa*, 221  
 Accumulation of Chalk, 363  
 Acidity, Moorland Waters, 311, 320, 331  
 Acklam, 220, 280  
     " Brow, 222  
     " Map, 486, 496  
 ACKROYD, W., 311, 320, 323, 331, 340  
 ACKROYD, WILLIAM (Obituary), 377  
 Ackton, Map, 483  
*Acisina*, 302  
 Acrespire (Halifax), 208  
*Acrolepis*, 133  
     " *hopkinsi*, 420  
*Actinocamax grossouvrei*, 378  
     " *plenus*, Swanland, 375  
     " *quodratus*, 444  
 Action of Heat on Sandstones, 93  
 Acton Hall Colliery, 271, 283  
     " borings, 273  
 ADAMS, A. LEITH, 147, 157, 167  
 ADAMSON, J. E., 195  
 ADAMSON, S. A., xxx., 188, 189, 190,  
     192, 194, 197, 199, 201, 202, 203,  
     205, 208, 209, 210, 212, 213, 214,  
     216, 217, 218, 220, 221, 222, 223,  
     224, 225, 226, 227, 228, 232, 245  
 ADAMSON, S. A., Obituary, 228, 230  
 Adderton Quarries, 5  
 Addlecroft, Map, 489  
 Addresses by J. Aitkin, 120  
     " W. Barrett, 116  
     " R. Carter, 147  
     " R. A. C. Godwin-Austin,  
         117  
 Addresses by J. Phillips, 136  
     " H. C. Sorby, 165  
     " W. C. Williamson, 187  
     " on Fossil Plants, 184  
     " to Tyneside Field Club, 182  
 Adel, Flint Implements, 121  
 Adlingfleet, Map, 501  
 Admiralty Chart, 26  
     " Publication, 133  
     " Report, Spurn, 73  
 Adwalton Stone Coal, 331, 430  
*Ægoceras* (?) *finitimum*, 468.  
 Aerolites, 254  
     " (Wold Newton), 282  
 Affinities of *Anthracopectera*, 257  
     " *Astromylon*, 176  
     " Cannel, 430  
     " Dodoxylon and Cordaites,  
         253  
     " Fossil Plants, 307  
     " *Matonia pectinata*, 317  
     " Palæozoic Plants, 337  
     " *Porosphæra*, 362  
     " *Sigillariæ*, 166  
 Afforestation, Commission on, 435  
 AGASSIZ, L., xxxi., 51, 63  
 AGASSIZ, M., 65  
 Agden Reservoir, 106  
 Age of the Earth, 340  
     " Mammoth, 265  
     " Man, 203  
     " Millstone Grit, 67  
     " Palæolithic Man, 146  
     " Pennine Chain, 159, 160, 164,  
         165, 166  
     " Pennine Peat Moors, 364  
     " Waulden, 324, 335  
     " Yoredales, 343  
 Aggregate Deposits, 301  
 Agricultural Geology, 137, 354  
 Agriculture, 18, 23, 24, 25, 27, 30, 34,  
     123  
     " and Geology, 64, 256  
     " and Lime, 68  
     " Practical, 152  
     " Text Book, 167  
     " West Riding, 60, 62  
     " Wold District, 62  
     " Yorkshire, 186  
 Aids in Practical Geology, 408

- Ainderly Steeple, Map, 494  
 Ainsty Wapentake, 83  
 AINSWORTH, J., 49, 58  
 AINSWORTH, W., 26, 28, 29, 58  
 Aire and Calder Canal, 35, 43  
 Aire, Map, 476, 484  
   " River, Pollution, 231  
   " Soils near, 60  
   " Sources of, 235, 245, 323, 332, 456  
   " Valley, Carboniferous, 235  
   "   " Deposits, 91  
   "   " Extinct Animals, 86  
   "   " Gravels, 120  
 Airedale, 245, 391  
   " Boulder Clay, 322  
   " Carboniferous, 245  
   " Glacial Lakes, 379  
   " Glacier, 382  
   " : Glacier Work, 210  
   " Map, 498  
   " Recent, 426  
   " Scenery, 234  
   " Yellow Boulder Clay, 400  
   " Yellow Clay, 415  
 AIRY, H., 172, 188  
 Aislaby Sandstone, 333  
 AITKEN, —, 113  
   " J., 133, 142, 161  
 AITKIN, —, 114  
   " J., 120  
 AKERMAN, J. Y., 69  
 Alabaster in Yorkshire, 423  
   " Tables, 423  
 Aland Granite, Easington, 321  
*Alasmodon vetustus*, 439  
 Albany, Map, 487  
 Albert Dock, Hull, 139  
   "   " (Peat), 125  
 Aldborough, 33, 76, 261, 280  
   " Ammonites, 433  
   " Boulders, 419  
   " Coast Erosion, 441  
   " Mammoth Tooth, 346  
   " Map, 492, 499  
   " Roman Remains, 68  
   " Specton Clay, 433  
 Albrough, 260  
   " boulders, 357  
 Aldburgh, Sanitation of, 307  
 ALDERSON, BARON, 54  
   " J., 24  
 Aldfield, 26  
   " Boulders, 352, 353  
   " Spa, 61  
 Aldwarke Main, 246  
   " Colliery, 160, 245  
 ALEXANDER, W., 18, 19, 21, 56, 58, 60,  
   61, 167, 172  
 Alexandra Dock, Hull, Sections, 321,  
   351  
 Algæ, Calcareous, in Rocks, 459  
 Algæ, Cretaceous, 464  
   " Fossil Carboniferous, 187  
   " Rock forming, 469  
 Alkaline Waters at Leeds, 90  
 ALLANSON-WINN, R. G., 350, 359  
 ALLCHIN, J. H., 407  
 Alligator Bones, 15  
 ALLEN, B., 9, 10  
   " E., 110, 116, 123  
   " H. A., 340, 341, 350, 359, 368,  
   " J., 60 376  
   " T., 43, 44, 48  
 Allenheads, Lead Veins, 100  
 Allerston, Low Moor, Map, 494  
   " Map, 495  
   " Moor, Pits on, 298  
 Allerton, Map, 497  
   " Bywater, 476  
   " Boring, Map, 491  
 ALLISON, T., 167  
 ALLISON, THOMAS, 116, 172  
 Allom, 6 (*see* 'Alum')  
 Alluvial Hollow, Sand-le-Mere, 429  
   " Lands, 91  
   " Section (Wakefield), 91  
   " Strata, Ouse, 155  
 Almes Cliff, 242  
 Almes Cliff Crag, 239  
 Almas Cliff, 31  
 Almondbury (Sandstone), 93, 96  
 Alne, Map, 496  
 Alom, 5 (*see also* 'Alum')  
 Alom Works, Whitby, 112  
 Alpine Glaciers, 266, 276  
 Alston, 28  
 Alston Moor, 26  
 Altered Lias Shale, 341  
 ALTHAM, J., 97  
 Altrincham, Map, 482  
 Alton, 467  
 Alum, 6, 7, 15, 16, 17, 19, 24, 28, 39, 41,  
   47, 251, 453  
   " (*see also* Allom and Alom).  
   " Industry, 103  
   " Mining, 466  
   " Pot, 354  
   " Trade, early, 470  
   " Well, Harrogate, 168  
   " Works, 89  
 Aluminous Schistus, 28  
*Amalthus lenticularis*, 201, 424  
 Amateur Spirit in Scientific Work, 281  
 Amber, 282  
 American Glacial Deposits, 429  
*American Journ.*, 67  
*American Journ. Science*, 167, 205,  
   254, 405  
 American Surface Geology, 156  
 Ammonites, Aldborough, 433  
   " and Allies, 274  
   " Classification, 166

## Ammonites from Drift, 433

- " Hessle, 189
- " Inferior Oolites, 239, 388
- " Jurassic, 262, 361
- " Kellaways Rock, 456
- " Lias, 103, 156, 160, 172,  
181, 187, 201, 267, 274
- " Lias and Oolites, 97
- " Lias (Distribution), 127
- " Lias, Monograph, 166, 177
- " Monograph, 64, 229
- " Oolites, 203, 221, 229
- " Scarborough Limestone,  
448
- " Speeton, 378, 389
- " Type, 448

Ammonites *aculeatus*, 458

- " *acuticarinatus*, 437
- " *alternatus*, 408
- " *andraei*, 448
- " *anguiformis*, 448
- " *annuliferus*, 448
- " *arctus*, 437
- " *athleticus*, 448
- " *aureolus*, 436, 468
- " *aureus*, 408
- " *birdi*, 436
- " *boulbiensis*, 408
- " *braikenridgii*, 457, 458
- " *cereus*, 448
- " *communis*, 88
- " *compactilis*, 437
- " *cornutus*, 437
- " *crassiusculus*, 448
- " *crassoides*, 458
- " *crassulosus*, 448
- " *crosbeyi*, 448
- " *defossus*, 458
- " *dennyi*, 408
- " *denotatus*, 448
- " *depressus*, 436
- " *elegantulus*, 465, 468
- " *exaratus*, 408
- " *fabricatus*, 437
- " *fasciatus*, 458
- " *figulinus*, 436
- " *flavus*, 448
- " *fonticulus*, 448
- " *foveatus*, 458
- " *gagatus*, 458
- " *gracilis*, 468
- " *gubernator*, 458
- " *hastatus*, 468
- " *heptangularis*, 468
- " *heterogenes*, 448
- " *heterophyllus* (Whitby), 120
- " *hyperbolicus*, 468
- " *integricostatus*, 448
- " *lutescens*, 458
- " *lectus*, 437
- " Lias 475

Ammonites *limatus*, 448

- " *luridis*, 458
- " *maculatus*, 448
- " *miles*, 437
- " *mulgravius*, 408
- " *mutatus*, 468
- " *natidus*, 458
- " *nautiliformis*, 437
- " *nitescens*, 458
- " *nitidus*, 458
- " *obsoletus*, 468
- " *omissus*, 436
- " *ovatus*, 468
- " *owenensis*, 448
- " *perarmatus*, 448
- " *perigrinus*, 458
- " *phillipsi*, 458
- " *pinguis*, 458
- " *polyophyllus*, 408, 422
- " *puteolus*, 448
- " *quadricornutus*, 437
- " *radiatus*, 437
- " *regularis*, 458
- " *resupinatus*, 408
- " *reticularis*, 408
- " *retusus*, 458
- " *ripleyi*, 408
- " *scoresbyi*, 437
- " *semicelatus*, 437
- " *serpentinus*, 420
- " *simpsoni*, 448
- " *sinuatus*, 468
- " *siphuncularis*, 448
- " *socialis*, 468
- " *solitarius*, 448
- " *spicatus*, 468
- " *subconcausus*, 408
- " *subtensis*, 468
- " *subtriangularis*, 458
- " *sulcatus*, 437
- " *tenellus*, 448
- " *transformatus*, 458
- " *trivialis*, 448
- " *turriculatus*, 436
- " *validis*, 458
- " *vermis*, 458
- " *vortex*, 436
- " *vorticellus*, 458
- " *whitbiense*, 437

## Ammonoidea, 293

## Amotherby, Map, 486

## Amphibia, fossil, 216, 234

## Amphibian remains, Yaredale, 135, 136

## Ampleforth, Map, 495

## Analyses of Barnsley Coal, 269

- " Ben Rhydding Water, 92
- " Bones, 68
- " Bradford Water, 171
- " Building Stones, 127
- " Chalk, 150
- " Cleveland Dyke, 395, 404

- Analyses of Cleveland Iron, 116, 433  
 " Ironstone, 115  
 " Coal, 83, 340, 342, 350, 390  
 " Coke, 340, 342, 350, 390  
 " Concretion, 200, 208  
 " Dinsdale Spring, 209  
 " Fire Clay, 91  
 " Harlow Car Waters, 102  
 " Harrogate Springs, 116, 183  
 " Waters, 92, 105,  
 107, 110, 114, 119, 121,  
 122, 131, 132, 134, 147,  
 193, 251, 259, 268, 271,  
 316, 317, 318  
 " Huddlestone Limestone,  
 150  
 " Stone, 361  
 " Hull Water, 171  
 " Ilkley Spa, 468  
 " Iron, West Riding, 140  
 " Iron Ore, Cleveland, 124  
 " Iron Ores, 84, 101, 103  
 " Ironstone, 129  
 " Jet, 404  
 " Knaresborough Dropping  
 Well, 292  
 " Water, 282  
 " Limestone, 68, 119, 129  
 " Limestone, Ripon, 71  
 " Limestones, 67, 115  
 " Meteorites, 438  
 " Mineral Waters, 68, 87, 90,  
 183  
 " Scarborough, 98  
 " Northallerton Wells, 168  
 " Permian Limestone, 440  
 " Phosphatic Nodules, 354  
 " Pontefract Water, 248  
 " Red Chalk, 101  
 " Slag, 172  
 " Soils, 67  
 " Springs, 79, 80  
 " Stone, 350  
 " Water, 132, 134  
 " Hull and York, 138  
 " Thirsk, 156  
 " York, 188  
 " Yorkshire Waters, 303  
 Analyst, 171  
*Anas boscas* skull in peat, 317  
 Anatomy of *Calamostachys*, 428  
 " Fossil Plants, 315  
 Ancestors of Angiosperms, 392  
 Ancient Animal life, 257  
 " beach, Bridlington, 213, 243  
 " Bingley, 299  
 " British Glaciers, 251, 266  
 " Canoe, Giggleswick, 98  
 " Coal Mining, 204  
 " forest (Pennine Chain), 175  
 " Geography of Yorkshire, 89  
 Ancient Glaciers, Midlands, 304  
 " Nuts, 111  
 " Plants, 433  
 " Sea Beach, Sewerby, 225  
 " Slag heaps, 445  
 " Stone Implements, 128, 293  
 " Trees, 111  
 " Volcanoes, 292, 294  
 ANDERSON, TEMPEST, 301  
 Andesite, Borrowdale, 295  
 ANDREWS, W., 246, 253, 254  
 'Anecdotes of British Topography,'  
 xxxiii.  
 Angermanland Granite, Easington, 312,  
 321  
 Angiosperms, Ancestors of, 392  
 " Mesozoic, 196  
 Anglian Sculpture, 437  
 Anglo-Saxon Burial Mounds, 373  
 Angram, *Griffithides*, 421  
 " Map, 492  
 " Trilobite, 398  
 Angrove Stone, 393  
 Anhydrite, 469  
 " in N. Yorkshire, 312  
 Animal bones in tumulus, 259  
*Animal World*, 422  
 Animals, European, 394  
 Ankerite in Coal, 447, 449  
*Annales, Chim.*, 31  
*Annales des Mines*, 97, 99  
*Annales Soc. Geol. Nord.*, 142, 167  
*Annals of Botany*, 217, 219, 280, 327,  
 354, 394, 431  
*Annals of British Geology*, 255, 272  
 'Annals of Coal Mining,' 283, 293, 303,  
 315, 333, 343, 361  
 'Annals of Coal Trade,' 333, 361  
*Ann. Mag. Nat. Hist.*, 63, 70, 71, 72,  
 74, 76, 85, 86, 88, 104, 106, 108,  
 111, 163, 183, 185, 190, 191, 197,  
 215, 230, 231, 232, 251, 261, 274,  
 276, 284, 285, 330, 355, 457, 467  
*Ann. Phil.*, 31, 32, 35, 37, 38, 39, 40,  
 41, 42  
 Ann. Rep. Geol. Survey, 291  
*Ann. Rep. Huddersfield Nat. Hist. and*  
*Photo Soc.*, 421, 456, 465,  
 476  
 " *Hull Lit. and Phil. Soc.*, 291  
 " *Malton Field Nat. and Sic.*  
*Soc.*, 189, 190, 195, 325  
 " *Scarborough Phil. and Arch.*  
*Soc.*, 408, 423, 429, 437,  
 445, 449, 458, 469  
 " *Scarborough Phil. Soc.*, 370  
 " *Smithsonian Institution*, 222  
 " *Warwick Nat. Hist. Soc.*,  
 138  
 " *Whitby Lit. and Phil. Soc.*,  
 408

- Ann. Rep. Yorks. Phil. Soc.*, 149, 150,  
179, 219, 221, 227, 244,  
252, 259, 260, 262, 264,  
267, 288, 316, 354, 361,  
407.  
„ *and Proc. Belfast Nat. Field  
Club*, 455  
„ *and Trans. Manchester  
Micro. Soc.*, 475  
„ *and Trans. North Stafford-  
shire Field Club*, 386, 392  
*Ann. Sci. Nat. Bot.*, 71  
*Ann. South African Museum*, 402  
Annelid, Jaw-Apparatus, 285  
Anniversary Address, J. Phillips, 93  
„ A. C. Ramsay, 103  
„ H. C. Sorby, 160  
*Anodontacanthus*, 168  
Anomalous Growth of Oysters, 125  
ANSTED, D. T., 152  
Anston Stone, 85, 188  
Antarctic flora, 462  
„ fossil plants, 473  
Anthracite, 269  
*Anthracomya*, 257  
*Anthracomya*, Monograph, 265, 275, 284  
*Anthracopectera*, 257  
Anthropology, Bibliography of, 316  
Anticlinals, Craven, 114  
Anticlines, Harrogate, 263  
*Antiquary*, 320, 327, 463  
Antiquities of Halifax, 187  
„ Stone Age, 345  
Antiquity of Man, 100, 132, 135, 145,  
148, 151, 227, 275, 304, 447, 471  
Antlers of Red Deer, 307, 308  
'Antonini iter Britanniarum,' 10  
Antrim, 296  
*Aporrhais robinaldina*, Speeton, 106  
Apperknowle, boring, 282  
Apperley Bridge, Glacials, 210  
Apperley, Fault, 201  
APPERSON, G. L., 320  
Appleby, 302, 308  
Appletreewick, Map, 497  
Applied Geology, 303, 312  
Aptian, 288  
Araucarioxylon, Structure of, 337  
Araucarites phillipsii, Haiburn Wyke,  
116  
ARBER, E. A. NEWELL, 350, 407, 423,  
435, 440, 448, 467  
ARBER (Mrs.) E. A. NEWELL, 423  
*Archæologia*, 21, 50, 333  
Archæological Discoveries, East Yorks.,  
395  
„ Index, 69  
*Archæological Journal*, 78, 423  
*Arch. Phys. Path. Chem.*, 65  
Archæology, 197  
„ and Geology, 108  
Archæology and Geology, Relations of,  
78, 80  
Architecture, Sandstones in, 367  
Arctic fauna, 224, 234  
„ Plants, 252  
„ Plants, origin, 301  
Ardsley, 438  
Ardsley Colliery, 174  
Ardwick Series, fossil plants, 350  
Areas of Depression, 391  
'Argiles de Speeton,' 252  
*Argillæcia aequalis*, Grassington, 197  
Arkendale, boulders, 220  
Arlesley, 439  
ARMISTEAD, WILSON, 73  
ARMITAGE, W. J., 89  
Armley, 476  
ARMSTRONG, A. LESLIE, 407, 423, 436  
ARMSTRONG, J. L., 147  
Armthorpe Gravels, 379  
Arncliffe, Map, 495  
Arnecliffe, 9, 255  
ARNOLD, J. O., 457  
Artesian Well, 456  
„ at Masham, 150  
Arthington, 347, 470  
Artificial Stones, 400  
ARTIS, E. T., 40  
Ascension, Volcanic Bomb, 223  
ASHLEY, T., 331  
Ashton-under-Lyne, Waterworks, 430  
ASHWORTH, J. H., 387, 398, 457  
Askern, 34, 129, 261, 378, 409, 449, 468,  
470  
„ Bog, 329  
„ Map, 501  
„ Mineral Waters, 255  
„ Naturalists at, 194  
„ Spa, 237  
„ Waters, 62, 229, 271  
Askham Bog, 157  
Askrigg, 374, 413, 472, 474  
„ Geology of, 372  
„ Limestone, 231  
„ Map, 479, 494  
„ (*Murchisonia*), 223, 248  
Aspects of Modern Petrology, 438  
ASPLAND, T. L., 81, 82  
*Asteracanthus* in Cornbrash, 426  
„ *ornatissimus*, Malton, 195  
„ Seamer, 437  
Asteria, 36  
Asteriadae, fossil, 70  
*Asterias arenicola*, 69  
*Asteroceras acceleratum*, 433  
„ *stellare*, 433  
*Asteroidea*, 101, 166  
„ Lias, 304  
*Asterophyllites*, 224  
*Asterophyllites grandis*, 420  
Aston, Map, 487

- Astroites, 6  
*Astropecten hartingiae*, 72  
*Astromyelon*, 181  
*Astromyelon*, root of, 171, 176  
 ATKINS, J., 13, 14, 49  
 ATKINSON, D. H., 188  
     " J., 39  
     " J. B., 271, 281, 291, 301  
     " J. C., 238, 246, 291  
     " J. T., 157  
 Atlas, Geological, 465  
     " Stanford's, 367, 398, 476  
     " Water Supply, etc., 167  
 Atmospheric Denudation, 108  
 Attercliffe, Map, 502  
 Attrition Tests, Road stones, 382  
 Atwick, 37, 308  
     " boulders, 259, 280, 317, 328,  
         338  
     " Map, 498  
     " Shap Granite, 293  
 AUBISSON, D', 39  
 AUDEN, G. A., 341  
 Augite in Whin Sill, 198  
 Augite-syenite at Hessle, 432  
 Augites, Unaxial, 450  
 Aulophyllum, 463  
 AUSTEN, R. A. C. GODWIN, 83, 106, 108  
 Austhorpe, Map, 484, 491  
 Austwick, 197  
 Austwick Common (Peat), 125  
 Autobiography, Williamson, W. C., 288  
 Avalanche in Dent Valley, 109  
 AVEBURY, LORD, 104, 320, 325, 341,  
     350, 359, 457 (*see also under*  
     LUBBOCK, J.)  
 AVELINE, W. T., 94, 96, 120, 121, 122,  
     127, 128, 129, 161, 211, 477, 478,  
     479, 480, 484, 497, 498, 499, 500,  
     501, 502  
*Avicula contorta* Zone, 94  
*Aviculopecten culpini*, 412  
 Avonian, 420, 433  
 Axholme, 262  
     " Rivers, 409  
 Aysgarth, 256  
     " Map, 480, 494  
 Ayton, 468  
     " boulders, 329, 347, 352  
     " Excavations, 361  
     " Map, 492  
     " Whin Dyke, 341  
 AYTOUN, R., 238  
 Backbone of England, 243  
 BACKHOUSE, J., 281, 376, 407, 448  
 Bacteria in Coal, 462  
*Bactritida*, 293  
*Bacup*, 115  
 Bagden, Map, 487  
 BAGNALL, C., Coal (lecture on), 113  
*Baiera gracilis*, 278  
 Baildon, fish remains, 136  
     " Green, 296  
     " Map, 483, 485  
 BAILEY, G., 228, 229  
     " H., 211, 212  
     " M., 195  
     " W. H., 98, 99  
 BAIN, —, 368  
 BAIN, W., 368, 370  
 Bainbridge, Map, 494  
 BAINES, H., 58, 59  
     " S., 87, 89, 91  
     " T., 123, 130  
 Bainton boulders, 329  
     " Map, 498  
*Bairdia curta*, 159  
     " *liassica*, 266  
 BAIRSTOW, U., 331  
 BAKER, E. A., 387  
     " FRANK, 281  
     " J. B., 172  
     " J. G., 97, 100, 172, 211, 212,  
         217, 221, 228, 246, 350, 356, 376,  
         384  
 Balby boulders, 292, 302  
     " Eskdale granite, 311  
     " Glacials, 183  
 BALCH, H. E., 387  
 Baldersby boulders, 222, 269, 276  
 BALDERSON, —, 241  
     " M., 211  
     " ROBERT R., 211, 221, 228  
 BALL, L. C., 398  
 BALLORE, M. F. DE MONTESSUS DE, 281  
 Balls of Stone, 24  
 Balnea, 24  
 Baltic Glacier, 294, 314  
 BANCROFT, F. J., 368, 375  
 BANDINAL, BULKELEY, xxxiii.  
*Bankfield Museum Notes*, 451  
 BANKS, W., 81, 82  
 Banks, flora of, 248  
     " of Yorkshire rivers, 254  
 Barden Fell, Storm, 411  
 Barden Moor, Map, 497  
 Barium, Boston Spa, 335  
     " Harrogate, 107  
 BARKER, W. G. M. JONES, 83  
 Barlow, boring, 389, 399  
     " Map, 482  
 Barmby Moor, History, 442  
 Barmston, Map, 497  
 Barnard Castle, 249, 253  
*Barnard Castle*, 281  
 Barnard Castle, boulders, 210  
     " Map, 480  
     " Sanitation, 372  
 BARNES, J., 281, 285, 291, 295, 331  
     334, 350  
 BARNES, J. B., 376, 377  
 Barnoldswick, Map, 498

- Barnsley, 188, 345, 374, 407  
   " Bed, 164  
   " *Bothrodendron*, 224  
   " Boulder Clay, 148  
   " Boulders, 276, 376  
   " Coal, 147, 151  
   "   " Analysis, 269  
   "   " Bed, 262  
   "   " Changes in, 303  
   "   " (Gas), 147  
   "   " (Insects), 343  
   "   " Map, 487, 488  
   "   " Seams, 139  
   "   " Wash-out, 164  
   " Coalfield, 244, 252  
   "   " GREEN on, 113  
   " Colliery, firedamp, 86  
   " Cordaites, 358  
   " *Cyclopteris*, 217  
   " Earth Shakes, 369  
   " *Equisetum*, 251  
   " Fire Damp, 151  
   " fossil ferns, 215  
   "   " flora, 184  
   "   " plants, 165  
   " Geology, 153, 184  
   " gravel, 201  
   " Lycopods, 215  
   " Map, 478, 483, 488, 501  
   " Marine beds, 399  
   "   " fossils, 409, 425  
   " Minerals, 88  
   " Mineralogy, 197, 205  
   " Naturalists' Soc., 176  
   " Outburst of Gas, 161  
   " Peacock Coal, 272  
   " Sketch of, 88  
   " *Sphenophyllum*, 251  
 BARR, T., 133  
 Barras Bridge, 224  
 BARRETT, WILLIAM, 116  
 BARRETT-HAMILTON, GERARD, E. H.,  
   436  
 BARROIS, C., 142, 157, 211, 219  
 Barrow, 308  
   " Collieries, 164, 246, 300  
 BARROW, G., 147, 161, 172, 174, 188,  
   189, 195, 196, 211, 238, 241, 242,  
   244, 341, 479, 480, 485, 486, 491,  
   492, 493, 494, 495  
 BARROW, T. W., 97  
 Barrows, British, 149  
 BARRY, CHARLES, 57  
 BARRY, F. W., 229  
 Bars in Estuaries, 236  
 Barton, 308  
   " Glacial Striæ, 297  
   " Map, 492  
 Barton-le-Willows, Map, 486  
 Barwick-in-Elmet, boring, 412  
 Barytes, 28  
 Basalt, 50  
 Basalt at Wassand, 316, 326  
 Base of Carboniferous, 147, 148, 149, 152  
   " Limestone, 207  
 Basement Beds, Ingleton, 381, 455  
   " Carboniferous, 241  
   " Clay, 234  
   " Clay, Flamborough, 224  
 Basic Rocks, 249  
 Bateman Collection, Catalogue, 331  
 Bath, 395  
 BATHER, F. A., 281, 311, 320, 359, 363,  
   387, 436, 448, 457, 465, 467  
 Bathing, 61  
   " places, 61  
   " Treatise on, 56  
 Baths, 71, 343  
   " of Europe, 118  
   " and Waters, 138  
   " and Wells, 126  
 Batley, 22, 210  
   " Boring, Map, 489  
   " Sanitation, 382  
 Battys Ford, boulders, 292  
 Baugh Fell, Map, 493  
 Baum Pots, Composition of, 192  
 Bawtry, 342  
 BAYFORD, E. G., 350  
 BAYNARD, E., 8  
 BAYS, J. E. DEL., 56  
 Beach at Hessle, 378  
   " Sewerby, 371  
 Beach material, Movement of, 314  
 Beads, fossil, 456, 465  
 BEALEY, A., 77, 116, 118, 127  
 BEAN, —, 329  
   " J. A., 320, 322, 323  
   " W., 49, 52, 57  
*Beania*, 117  
 Bear, 37  
 Bear remains, Bridlington, 365  
 Bear's bone at York, 167  
 BEASLEY, H. G., 467  
 BEAUMONT, ELIE DE, 49  
 Beauties of England, 29  
 Beavers in East Yorkshire, 355  
   " Yorkshire, 357  
 BEAZELEY, A., 320  
 BECHE, DE LA, 49  
 BECKWITH, B. S., 229, 320  
 Bedale, Map, 494  
   " Sanitation, 403  
 BEDELL, E. W., 70  
 BEDFORD, J. E., 194, 195, 202, 238,  
   240, 245, 246, 247, 271, 272  
   " (Biography), 210  
 BEDWELL, F. A., 152  
 Bedwell Collection of Fossils, 291  
 Beeford, Map, 498  
 Beekite, 455  
 Beeston, 210



- Beeston Bed, Coal, 412  
 „ Boring, Map, 489, 490  
 „ Coal, 283  
 „ Manor Colliery, Map, 489, 490  
 „ Seam, 273  
 Beetles in Peat, 350  
 Beginnings of Geology, 457  
 BELCHER, H., 52, 53, 76, 77  
 BELCOMBE, —, 23, 24  
 „ W., 27  
 Belemnite, Deformed, 387  
 „ in Black Flint, 403  
*Belemnitella plena*, Zone, 337  
 „ *plenus*, Swanland, 375  
 Belemnites, Chalk, 384, 455  
*Belemnites grossouvrei*, 378  
 „ *jaculum* (deformed),  
 Speeton, 387  
 Belemnites (Kimmeridge Clay), 122  
*Belemnites lanceolatus* in flint, 431  
 Belemnites, Lias, 109, 112, 119, 423  
 „ Lias, Types of, 243  
 „ Lincolnshire, 432  
 „ Monograph, 119, 122  
 „ Oolite, 109, 119  
 „ Oxford Clay, 122  
 „ (Phillips on), 109  
 „ (Simpson on), 109  
 „ Speeton, 353  
 „ Speeton Clay, 383  
*Belemnitidæ* (Monograph), 105, 109,  
 112, 119, 122  
 Belemnoid, Chalk, 360  
*Belfast*, 264  
 Belfast Nat. Field Club, 280  
 BELINFANTE, L. L., xxxi., 291, 292,  
 311, 320, 334, 341, 350, 407, 423,  
 436, 448, 451, 458, 467, 468  
 BELL, A., 195, 410, 436, 438  
 „ D., 238, 292  
 Bell Dean, 407  
 BELL, HUGH, 177  
 „ I. L., 101, 116  
 „ J., 123, 125  
 „ J. L., 202  
 „ J. P., 79  
 „ T., 99, 229, 292  
 „ T. L., 99, 127  
 „ Wm. R., 255  
 Bampton Cliffs, 394  
 Ben Rhydding, Water at, 92  
 BENNETT, W., 62, 63  
*Bennettites*, 307  
 BENNEY, A. C., 238  
 BENNEY, A. E., 376, 436  
 BENNIE, J., 195, 198  
 BENSON, G., 436  
 Bentham, Map, 478, 495, 496  
 Bentley, Marine fossils, 425  
 „ Section at, 425  
*Berenicea scobinula*, 284  
*Berg-hutt, Zei.*, 149  
*Berlin*, 18, 45, 211, 215, 218, 219, 256,  
 429  
 Bernician, Faunal Succession, 444  
 BERT, E., 152, 155  
 BERTRAND, C. E., 320  
 Bessingby boulders, 270, 276, 279, 289  
 BEST, G., 301  
 Better Bed Coal, 193, 270, 412  
 „ Halifax, 230  
 „ (*Lepracanthus*), 318  
 BEVAN, D. W., 376, 408, 423, 458, 467  
 „ G. P., 142, 144, 146, 147, 152,  
 161, 167, 172, 177, 182, 202, 221,  
 238, 262  
 'Beverlac,' 46  
 Beverley, 23, 24, 45, 46, 261, 280, 308,  
 347  
*Beverley*, 82, 83, 109, 126, 470  
 Beverley Boulders, 347  
 „ Corporation Minutes, 402  
 „ fever at, 186  
 „ Map, 479, 499  
 „ Mollusca, 173  
 „ Sanitation, 360  
 „ Upper Chalk, 321  
 „ Waterworks Site, 402  
 BEWICK, J., 87, 94, 116  
 BEYSCHLAG, F., 467, 471, 475  
*Bibliographia Zoologiae et Geologiae*,  
 xxxi.  
 'Bibliographical Account of English  
 Topography,' xxxiii.  
 Bibliographie Spéléologique, 297  
 Bibliography, 92, 192, 194, 210, 221,  
 228, 241, 249, 257, 289,  
 299, 308, 317, 327, 328,  
 337, 347, 356, 417, 431,  
 443, 463, 473  
 „ Anthropology and  
 Ethnology, 316  
 „ Borings and Wells, xxxi.  
 „ Carboniferous Flora, 278  
 „ Lamelli-  
 branchiata, 284  
 „ Coast Erosion, xxxi., 273  
 „ Changes, 200, 290  
 „ Cretaceous Algæ and  
 Fungi, 464  
 „ Lamelli-  
 branchiata, 358, 465  
 „ Echinodermata, 96, 311,  
 320  
 „ Fossil sponges, 205  
 „ Glacial, 263, 271, 274,  
 275, 280  
 „ Halifax, xxxiv., 437, 449  
 „ Mammals, 307  
 „ Midland Glaciology, 275  
 „ Mineral Waters, 222  
 „ Mollusca, 307



- Bog, Askern, 329  
     " Askham, 157  
 Bog-oak, Horbury, 372  
 BOGG, E., 301, 341, 359, 376, 398, 400  
 BOHN, G., 133, 136  
 Bolam, 297  
 Bolides, 254  
 Bolland, Carboniferous Limestone, 156  
     " Crustacea, 156  
     " Entomostraca, 108  
     " *Fistulipora*, 191  
     " *Levellia*, 244  
     " *Platycrinus*, 252  
     " Trilobites, 187  
 Boltby, Map, 485  
 Bolton, 79, 272  
     " Abbey, 56, 58, 60, 66, 132, 263  
     " " Kaolinite, 399  
     " Glacials, 246  
 BOLTON, HERBERT, 255, 436  
 Bolton, Museum, 335  
     " -on-Dearne, Geology of, 144  
     " Percy, Map, 483, 499  
     " Woods, *Saccammina*, 344  
 BOND, J. W., 320  
 Bone Bed in Coal, 143  
     " Cave at Skirethorns, 235  
     " Caves, Craven, 94, 97  
 Bones, Analyses, 68  
     " of Alligator, 15  
     " of *Ctenodus*, 170  
     " of *Elephas*, 136  
     " of Fallow Deer, 251  
     " Fluorine in, 65  
 BONNEY, T. G., 89, 91, 157, 202, 229,  
     255, 272, 281, 301, 332, 341, 342,  
     377, 388, 392, 393, 398, 409, 422,  
     424, 436, 448  
 'Book about Yorkshire,' 400  
     " of British Topography, xxxii.  
*Book of Nature Study*, 434  
 'Books, etc., about Bradford,' 273  
 BOOTH, A., 46, 56  
     " Ferry Road, Water, 263  
     " Holme Field Colliery, Map, 409  
 BOOTH, T. S., 368  
 Bootham School, 354  
 Border Country, 301  
 Bored Stones in Drift, 225  
 Bore-holes, Carlton Towers, 227  
     " Deviation of, 399  
     " Tubing, 98  
     " Stratford Main Colliery, 126  
 Boring, Allerton Bywater, Map, 491  
     " and Blasting, 91, 120  
     " Apperknowle, 282  
     " Barlow, 389, 399  
     " Barwick-in-Elmet, 412  
     " Batley, Map, 489  
     " Beeston, Map, 489, 490  
     " Birstall, Map, 489  
 Boring, Bradford Moor, Map, 490  
     " Bradgate, Map, 487  
     " Breaks Pit, Map, 490  
     " Bretton, Map, 488  
     " Briery Hall, Map, 488  
     " Carforth Bridge, Map, 491  
     " Carlinghow, Map, 489  
     " Cawthorne, Map, 488  
     " Chevet Lane, Map, 488  
     " Cleckheaton, Map, 489  
     " Colton, Map, 491  
     " Curwell, Map, 490  
     " Dalton, Map, 488  
     " Denby Grange, Map, 489  
     " Dewsbury, Map, 489  
     " Doncaster, 208  
     " Drax, 204  
     " East Harlsey, 427  
     " Emley Map, 488  
     " Fairburn, Map, 491  
     " Gawber Hall, Map, 488  
     " Goole, 172  
     " Halifax, 317  
     " Hallas Field, Map, 488  
     " Haxby, 252  
     " Heath Common, Map, 488  
     " Heckmondwike, Map, 489  
     " Hedon, 200  
     " Hostingley, Map, 489  
     " Hull, 432  
     " Humber, 119  
     " Irton, 184  
     " Lackenby Foreshore, 229  
     " Little Gomersall, Map, 489  
     " Loscoe, Map, 488  
     " Micklefield, Map, 491  
     " Mirfield, Map, 489  
     " Ossett, Map, 488  
     " Popplewell, Map, 489  
     " Queen's Head, Map, 490  
     " Rawden, Map, 490  
     " Rawmarsh, Map, 487  
     " Rillington, 288  
     " Royston, Map, 488  
     " Seacroft, Map, 490  
     " Selby, 399, 410, 426  
     " Shelf, Map, 490  
     " Simpson's Spring, Map, 489  
     " Snapethorpe, Map, 488  
     " Soothill, Map, 489, 490  
     " South Carr, 381, 410  
     " Strensall, 252  
     " Sunk Island, 80  
     " Swillington Bridge, Map, 48  
     " Vale of Pickering, 441  
     " Victoria Colliery, Map, 488  
     " Westgate Hill, Map, 490  
     " Wortley, Map, 490  
 Borings, Acton Hall Colliery, 273  
     " and Wells, Bibliography,  
         xxx.

- Borings, Bradford, 101, 102  
     " Carlton, Map, 487  
     " Dairycoates, 356  
     " East Yorkshire, 379  
     " for Coal, 149, 253, 466  
     " for Salt, 232, 240, 245, 253, 338  
     " for Water, 240  
     " Goole, 248, 263  
     " Halifax, 102, 356, 366  
     " Hedon, 356  
     " Huby, 267  
     " Hull, 95  
     " in Millstone Grit, 356  
     " Ingleton, 422, 426  
     " Kildale, 460  
     " Kippax, Map, 491  
     " Leeds, 66  
     "     " Map, 490  
     " Middlesbrough, 101, 102, 331, 338  
     " Millstone Grit, 366  
     " Raskelf, 267  
     " Selby, 263  
     " Vale of York, 267  
     " Yorkshire, East, 379  
 Boroughbridge, 68, 260  
 Boroughbridge, 1, 10, 11, 13, 21, 22, 29, 31, 33, 43, 47, 51, 69, 76, 188, 204, 239  
     " Guide to, 68, 259  
     " Map, 484, 496  
     " Monoliths, 471  
     " Water, 148  
 Borrowby, Map, 494  
 Borrowdale, Andersite in Bowland, 295  
     " Ash, Axe Heads, 442  
     " Volcanic Ash, Blackstone Edge, 309  
*Bos primigenius*, Loversal, 389  
     " Pontefract, 122  
 Boston Spa, 237  
     " Barium, 335  
*Boston, U.S.A.*, 316  
 BOSWORTH, T. O., 377, 381  
*Botanical Gazette*, 208  
 Botanical Survey, 356  
 Botany at British Association, 327, 462  
     " Makers of British, 462  
     " Palæozoic, 383  
     " West Yorkshire, 153  
 BOTHAMLEY, C. H., 167, 171, 229, 238, 255, 272  
*Bothrodendron minutifolium*, 215, 224  
     " *mundum*, 405  
     " Relationship of, 191  
 'Bottled Sunshine,' 199  
 Boulby, Lias fossils, 304  
     " (Saurians), 110  
 Boulder, 44  
 Boulder Clay, 244  
     " Airedale, 322, 400  
     " Barnsley, 148  
     " Basement, 234  
     " Bored Stones in, 225  
     " Bridlington, 152, 159  
     " Cheviot Porphyrites, 332  
     " East Anglian, 275  
     " *Elephas*, 317  
     " Extra-Morainic, 206  
     " Faulting in, 473  
     " Filey, 273  
     " Foraminifera, 280  
     " Formation of, 127  
     " Hesse, 354  
     " Humber, 463  
     " Marine, 141  
     " near Hull, 95  
     " Norwegian boulders in, 264  
     " Pebbles, 220  
     " Sands in, 239  
     " Scarborough, 104, 336  
     " Shells in, 154  
     " Shelly, 185  
     " Sub-Aqueous, 276  
     " Withernsea, 374  
 Boulder Clays, 123  
     " of Lincolnshire, 191  
 Boulder Committee, 201  
     " Cup and Ring Markings, 229  
     " Masses in Fireclay, 427  
     " Monument, 335  
 Boulders (*see also* Erratics).  
     " Aldborough, 357, 419  
     " Aldfield, 352, 353  
     " and Ice Sheets, 260  
     " Atwick, 259, 280, 317, 328, 338  
     " Ayton, 329, 347, 352  
     " Bainton, 329  
     " Balby, 302, 311  
     " Baldersby, 269, 276  
     " Barnsley, 276, 376  
     " Battye Ford, 292  
     " Bessingby, 270, 276, 279, 289  
     " Beverley, 347  
     " Bluestone Bottoms, 354  
     " Bradford, 293, 299, 325  
     " Brandesburton, 329, 348  
     " Brantinghamthorpe, 321, 342  
     " Brompton, 363  
     " Brough, 317, 328  
     " Burniston, 318, 328  
     " Burstwick, 270, 276, 278, 289, 338, 355, 357  
     " Calder Valley, 63  
     " Calderdale, 259  
     " Cambridge Drift, 415  
     " Carnaby, 351  
     " Cawthorne, 345

## Boulders, Chalk, 286

- " Claro Hill, 303
- " Cleveland, 353, 362
- " Clifton, 256
- " Coast, 233, 276, 278, 280, 299
- " Coniston, 300
- " Cotherstone, 304
- " Cottingham, 262
- " Coxwold, 353
- " Crosspool, 372
- " Cusworth, 302, 321
- " Dearne Valley, 295
- " Determination of, 272
- " Dimlington, 317, 328
- " Distribution of, 328, 337, 338, 415
- " Doncaster, 229, 302, 402
- " Dringhouses, 341
- " Easington, 312, 317, 321, 328, 356
- " East Riding, 276
- " Elæolite-Syenite, 264
- " Escrick, 353
- " Flamborough, 243
- " " Caves, 429
- " " Head, 216
- " Flaxby, 363
- " Giggleswick, 357
- " Goathland, 324
- " Granite, Halifax, 60
- " Guisborough, 214, 241
- " Halifax, 260
- " Harewood Park, 443
- " Harrogate, 297, 299
- " Hessele, 270
- " Holderness, 275, 299, 309
- " Holderness Coast, 311
- " Holmpton, 328
- " Horbury, 255, 272, 343
- " Hornsea, 270, 278, 280, 298, 328, 348, 402
- " Hull, 260, 417
- " Huntingdonshire, 269
- " in Coal, 203, 208, 212, 214, 245
- " in Halifax Hard Bed, 226
- " Indicator, 461
- " Ingleton, 260
- " Kelsey Hill, 349
- " Kilburn, 353
- " Kirklington, 264, 269, 276, 343
- " Kirkmoorgate, 338
- " Langcliffe, 353
- " Leconfield, 347
- " Leeds, 402
- " Lincolnshire, 289, 311
- " Lindholme, 212
- " Luddenden Foot, 259, 278
- " Lune Valley, 260
- " Market Weighton, 260, 315

## Boulders, Masham, 260

- " Meaux, 347
- " Melton, 270, 276, 279, 289
- " Middleton in Teesdale, 255
- " Millwood, 277
- " Mirfield, 272, 276
- " Mount Grace Priory, 313
- " Mytholmroyd, 296, 298, 328, 356
- " Newbald, 269
- " Noblethorpe, 307
- " Norber, 213
- " North Ferriby, 280, 299
- " Norwegian, 256, 257
- " Pateley Bridge, 402
- " Petrological Notes, 241
- " Petrology, of, 232
- " Pickering, 292
- " Preston, 300
- " Proportions of, 329
- " Redcar, 280, 293
- " Ribblesdale, 260
- " Ripon, 256, 260
- " Robin Hood's Bay, 299, 305, 324, 354, 413
- " Rokeby Park, 274, 276
- " Rothwell Haigh, 438
- " Royston, 276, 311, 376
- " Saltburn, 275, 276, 280, 293, 295, 306
- " Scalby Mills, 318, 328
- " Scandinavian, 278, 285
- " " Indicator, 415
- " Scarborough, 260, 309, 370
- " Settrington, 344
- " Shap Granite, 157, 162, 289, 299
- " Silurian, 148
- " Skidby, 269
- " Skipsea, 259
- " Skirlaugh, 280, 300
- " Sources of, 328, 337, 338
- " South Cave, 402, 429
- " Sowerby, 276, 278
- " Sprotborough, 302
- " Spurn, 182
- " Staincross, 265
- " Stainton Woodhouse, 409
- " Staithes, 306
- " Sutton, 268
- " Swaledale, 308
- " Swanland, 280, 298
- " Swine, 267, 270, 288
- " Thirsk, 260
- " Todmorden, 272, 276
- " Topcliffe, 259
- " Types of, 329
- " Vale of Mowbray, 363
- " Vale of Pickering, 299
- " Wakefield, 256, 260
- " Wassand, 316, 326

- Boulders, Wawne, 354  
 „ West Riding, 299  
 „ Wetwang, 402  
 „ Wharfe, 150  
 „ Whashton, 304  
 „ Whorlton, 411, 457  
 „ Wighill, 343  
 „ Willerby, 317, 326  
 „ Winestead, 260  
 „ Withernsea, 270, 278, 328, 417  
 „ Wolds, 267  
 „ Yedmandale, 328, 346  
 „ York, 251, 255, 256, 296, 299  
 „ Yorkshire, 332, 401  
 „ Yorkshire Coast, 243, 265  
 „ „ East, 315, 324, 338  
 „ „ North East, 299  
 „ „ North West, 180  
 Boulsworth, Coal at, 110  
 BOULTON, W. S., 388  
 Boundary, Permo-Carboniferous, 293  
 Bournemouth, 316  
 Bow Fell, Map, 493  
 Bowden, Map, 482  
 BOWER, J. A., 133  
 Bowes, Map, 355, 480, 492  
 „ Moor, Map, 492  
 Bowland, 416  
 „ Borrowdale Andesite, 295  
 „ Forest, 280  
 „ „ Map, 478, 497  
 „ Knotts, Geology, 309  
 „ Map, 482  
 BOWLES, JOHN, 457  
 Bowling Iron Works, History of, 137  
 „ „ Map, 490  
 Bowness, *Geological Survey Memoir*, 127  
 „ Geology of, 218  
 Bowstead Edge, Map, 501  
 BOYD, W., 255  
 BOYLE, J. R., 221, 262, 272, 281  
 BOYNE, W., xxxii, 92  
 BOYNTON, T., 211  
 Brachiopoda, Carboniferous, 87, 94, 99, 162  
 „ Classification, 108  
 „ Cretaceous, 75, 81, 134  
 „ Devonian, 182  
 „ Distribution, 149  
 „ Introduction to, 76  
 „ Jurassic, 143, 152, 287, 332, 359  
 „ Liassic, 75  
 „ Monograph, 73, 76, 124, 134, 143, 162, 182  
 „ Oolitic, 69, 75, 141, 149, 227, 260  
 „ Organisation, 7, 108  
 „ Permian, 99, 162  
 „ Secondary Rocks, 120  
 Brachiopoda, Silurian, 124, 182  
 „ Tertiary, 134  
 „ Triassic, 143, 152  
 BRADBURY, C., 341  
 Bradford, xxxiv., 29, 34, 40, 81, 261, 270, 331, 332, 334, 337, 338, 339, 376, 413  
*Bradford*, 61, 108, 167, 231, 273, 330  
*Bradford Antiquary*, 445  
 Bradford Basin, 146  
 „ Beck, 330, 339  
 „ Books, xxxiv., 273  
 „ Borings, 101, 102  
 „ Boulders, 143, 293, 299, 325  
 „ Building Stones, 133, 136, 236, 386  
 „ *Calamites*, 358  
 „ Cannel Coal, 163  
 „ Carboniferous Vegetation, 351  
 „ Coal, 172, 323  
 „ Coal (*Calamites*), 451  
 „ Drift, 325, 336  
 „ Entomostraca, 116  
 „ Excursions, Programme, 202  
 „ Fish in Coal, 143  
 „ Fossil Tree, 202, 206  
 „ Geology of, 132, 136, 158, 330, 387  
 „ Glacial Beds, 146  
 „ Glacial Geology, 335  
 „ Glacial Lakes, 330, 367  
 „ Glaciation, 324, 334, 372  
 „ Grits, 170  
 „ Handbook, Brit. Assoc., 319, 325  
 „ History of, 61, 108  
 „ Ice Age, 373  
 „ Industries, 133  
 „ Labyrinthodont, 118, 121  
 „ Map, 478, 483, 489, 490, 499  
 „ Marsh Gas, 466  
 „ Millstone Grit, 358  
 „ Moor Boring, Map, 490  
 „ „ Water, 91  
 „ Museum, 319  
*Bradford Nat. Hist. Mic. Soc. Report*, 238  
 Bradford Philosophical Society, 108  
 „ Physical Geography, 100  
*Bradford Review*, 100  
 Bradford Sandstone, 382  
*Bradford Sci. Journ.*, 322, 361, 367, 369, 372, 376, 379, 387, 389, 391, 393, 398, 400, 401, 403, 411, 413, 414, 415, 421, 428, 430, 434, 436, 446, 447, 452, 455, 456  
 Bradford, sections, 389  
 „ *Stigmaria*, 138  
 „ Stone, 85, 435  
 „ Underground Heat, 199  
 „ Walks around, 231

- Bradford Water, 171  
 " Waters, 452  
 " Waterworks, 135, 221  
 " Yellow Clay, 436  
*Bradforth*, 23  
 Bradgate, boring, Map, 487  
 BRADLEY, L., 97  
 BRADSHAW, B., 173, 211, 247, 255  
 " C., 281, 424, 428, 436, 439,  
 458, 467, 470  
 BRADY, G. S., 133, 134, 135, 136, 138,  
 141, 182, 184, 202, 206, 262  
 " H. B., 107, 108, 120, 122, 143  
 " W. E., 311  
 Brafferton, 242, 415  
 " Map, 496  
*Brahmacrinus ponderosus*, 328  
 Braithwell, Map, 502  
 Bramley, Map, 483  
 Branches of *Lepidodendron*, 375  
 Brandesburton boulders, 348  
 " Map, 499  
 " Rhomb-porphry, 329  
 Brandsby, Map, 485, 496  
 BRANSHAW, THOS., 202  
 BRANSON, F. W., 320, 323  
 Brantinghamthorpe Boulders, 342  
 " Rhomb-porphry,  
 321  
 BRAUN, J., 138, 142  
 BRAUNS, REINHARD, 398, 404, 408, 418,  
 424, 432, 436, 444, 448, 454  
 BRAY, W. B., 66  
 Break in Silurians, 111  
 Breaks in Mesozoics, 103  
 Breaks Pit Boring, Map, 490  
 BREARE, W. H., 238, 241, 311, 399  
 Brecciation of Mineral Veins, 437  
 BREND, WILLIAM A., 311  
*Breslau*, 9  
 Bretton Boring, Map, 488  
 " Park, 230, 239, 242  
 BREWERTON, T. LE GAY, 34  
 BREWSTER, J., 24, 45  
 Bride Stones, 396  
 Bridestone, 60  
 Bridestones, Photographs, 347  
*Bridgewater Treatise*, 53  
 Bridlington, 32, 33, 68, 177, 217, 270,  
 272, 277, 308, 353, 474  
 " Ancient Beach, 213, 225,  
 243  
 " Bay, Geology of, 189  
 " Bear remains, 365  
 " Boulder Clay, 159  
 " Buried Cliff, 216  
 " Chalk, 72  
 " fossils, 58, 116  
 " Zoophytes, 57  
 " Crag, 52, 53, 57, 71, 85,  
 89, 103, 123, 130,  
 140, 152, 175, 177,  
 178, 363  
 Bridlington Crag, Foraminifera, 108  
 " Mollusca, 78  
 " Elephant remains, 89  
 " tusk, 93  
 " Enteric Fever, 170  
 " Entomostraca at, 85  
 " Evolution of, 454  
 " Fossil Tusk, 384  
 " Freshwater Remains, 159  
 " Geology of, 221, 228, 238  
 " Glacial Beds, 162, 168, 179  
 " Sections, 184, 233  
 " Gravels, 157  
 " Land Shells, 363  
 " Magnetic Declination, 131  
 " Map, 479, 481, 497  
 " Minerals, 111  
 " New Section, 365  
 " Post Tertiary Beds, 173  
 " Quay, 386  
*Bridlington Quay*, 111  
 Bridlington Shell Beds, 169, 175, 198  
 " Shells in Drift, 154  
 " Shelly Boulder Clay, 185  
 Brierley Common, *Cyclopteris*, 217  
 BRIERLEY, H., 272, 282  
 Brig, Filey, 418  
 BRIGG, J., 133  
 BRIGGS, H., 68  
 " J., 128  
 Brighouse, Map, 487  
 " Museum, 330  
 Brimham, 26, 31, 33, 48, 79  
 " Map, 484  
 " Marine Denudation, 105  
 " Moor, 407  
 " Rocks, 2, 54, 55, 56, 58, 60,  
 66, 104, 108, 126,  
 132, 188, 247, 255,  
 380, 402, 438  
 " Map, 496  
 Brine in Coal Measures, 183  
 " in Yorkshire, 227, 228  
*Bristol*, 36  
 Bristol Coalfield, 436  
 Britannia, 6  
 British Assoc., 280  
 " Handbook, 329  
 " Bradford, 325  
*British Assoc. Waterworks Eng.*, 316  
 British Barrows, 149  
 " Burial Mounds, 373  
 " Caves, 297, 359  
 " Chariot Burial, 395  
 " Columbia, Shell Beds, 198  
 " Dagger at Woodnook, 91  
 " Drifts and Interglacial  
 Problem, 382  
 " Earthquakes, 192, 399

- British Fauna and Flora, Origin, 381  
 „ Flora, Origin of, 316  
 „ Geological Photographs, 357  
 „ Glaciers, Ancient, 251  
 „ Habitations, Danby, 316  
 „ Ice Sheets, 422  
 „ Mammals, 436  
*British Manufacturing Industries*, 142,  
 144, 146  
 „ *Med. Assoc.*, 277  
 British Minerals, List of, 318  
 „ Museum, xxxii., 175, 191, 196,  
 198, 213, 216, 225,  
 227, 231, 234, 241,  
 274, 284, 293, 300,  
 302, 311, 313, 326,  
 337, 340, 345, 365,  
 384, 387, 398, 436,  
 461, 464  
 „ „ Collections, History  
 of, 363, 367  
 „ „ Gilbertson Collection,  
 159, 163  
 „ „ Sponges, 179  
 „ Petrography, 200  
 „ Petrology, 218  
 „ Scenery, 306  
 „ Strata, Table of, 340  
 „ Topography, Anecdotes, xxxiii.  
 „ Books of, xxxii.  
 BRITTON, T., 211  
 Broad Lane Junction, 270  
 Broad-Oaks Colliery, Map, 489  
 BROCKBANK, J. L., 458  
 „ W., 107, 108, 130  
 BROCKLEHURST, G. H., 188  
 BRODE, T. AINSWORTH, 341, 368  
 BRODIE, P. B., 67, 110, 138, 143  
 BRODRICK, HAROLD, 341, 359, 369,  
 376, 377, 380, 388, 391,  
 398, 408, 424, 436, 458  
 „ J. B., 113  
 Brodsworth Marine Beds, 399  
 „ Map, 501  
 Brompton Boulders, 363  
 „ Map, 495  
 BRONGNIART, A., 43, 54, 71, 72, 73  
 Brontæ, 8  
 Bronze Age Weapons, 327  
 „ Implements, East Riding, 211  
 BROOKE, E., 147  
 BROOKES, W. A., 51  
 Brookite, in Cleveland Ironstone, 363,  
 372  
 Broomhead, Map, 482  
 Brora, 396  
 Brotherton, Map, 500  
 Brough, 220, 222, 224, 328, 356, 407  
 „ *Acanthothyris*, 221  
 BROUGH, BENNETT, H., 321, 325, 359,  
 388, 399  
 Brough, Boulders, 232, 317, 328  
 „ *Cryptocleidus*, 327  
 „ Elephant Tooth, 395  
 „ *Elephas*, 298  
 „ Geology of, 337  
 „ Gravels, 355  
 „ Kellaways, 327  
 „ Mammoth Tusk, 355  
 „ Map, 486, 500  
 „ Permians, 81, 85  
 „ Saurians, 327  
 Broughton in Craven, 421  
 „ „ Map, 497  
 BROWN, R., 23, 24  
 BROWELL, E. I. J., 182  
 BROWN, —, 167, 171  
 „ A., 262  
 „ AND SONS, A., 342  
 „ GEO. H., 282, 321, 351, 359,  
 369, 377, 399, 408, 436  
 „ H. T., 211  
 „ JOHN, 87  
 „ J. C., 177  
 „ M. WALTON, 332, 342  
 „ T., 60, 63, 71  
 BROWNE, HORACE B., 448  
 „ JUKES A. J. (*see* A. J. JUKES-  
 BROWNE).  
 Browney Valley, 421  
 BROWNRIDGE, C., 202, 203, 210, 212,  
 220, 221, 239, 247, 255  
 BRUCE, LOW R., 282  
 Bruntcliffe Colliery, 271  
 „ Map, 489  
 BRUNTON, WILLIAM, 27  
*Bruxelles Acad. Sci. Bull.*, 88  
 „ „ *Mem.*, 80  
 BRYDONE, R. M., 458  
 Bryozoa, 300  
 „ Catalogue, 313  
 „ Cretaceous, 313  
 „ Jurassic, 181, 264, 274, 284  
 Bubwith, Map, 499  
 BUCHAN, W., 20  
 Buckden, 362, 365  
 „ Map, 495  
 Buckhorn Weston Tunnels, 99  
 BUCKLAND, —, 329  
 „ W., 38, 39, 41, 53  
 „ WILLIAM, Life of, 264  
 BUCKMAN, S. S., 203, 212, 219, 221, 227,  
 229, 239, 262, 332, 359, 388, 408, 423,  
 424, 436, 448, 449, 453, 458, 465, 468  
 BUDDLE, JOHN, 101, 102  
 Bugthorpe, 6  
 „ Map, 497  
*Builder*, 227, 333  
 Building of British Isles, 440  
 Building Stone, Anston, 71  
 „ Stones, 59, 65, 144, 215, 333,  
 343, 361, 445



- Building Stones, Analyses, 127  
 " " Bradford, 133, 136, 236, 386  
 " " Characters, 450  
 " " Effect of Fire on, 386  
 " " Examination, 450  
 " " Geology of, 428  
 " " Leeds, 386  
 " " Origin, 450  
 " " Weathering, 351  
*Bull. Acad. Roy. Belg.*, 198  
 " *Geol. Soc. Japan*, 227  
 " *Soc. Geol. Belg.*, 225  
 " *Soc. Geol. France*, 56, 124, 369  
 " *Soc. Imp. Nat. Moscow*, 225, 252  
 BULMAN, H. F., 262  
 " G. W., 212, 239, 247, 301  
 Bulmer, Map, 496  
 BUNBURY, C. J. F., 73  
 Bunbury Collection, 268, 278  
 BUNKER, T., 301  
 Bunter, Blowing Wells in, 161  
 Burdale, 280  
 Burial, British Chariot, 395  
 " Cairns, 407  
 " Mounds, East Yorkshire, 373  
 Buried Cliff, Sewerby, 216  
 " Forest, Hull, 194  
 " Forests, 52  
 " Valley, Flamborough, 328, 431  
 Burlington Quay, 52  
 BURN, D., 195  
 Burn Moor, Map, 496  
 BURNET, ARTHUR, 408, 468  
 BURNETT, R. T., 182  
 Burniston, 45  
 " Boulders, 318, 328  
 Burnley, 466  
 " Coalfield, 139  
 " Map, 482  
 BURNS, D., 480  
 Burnsall, 465, 470, 476  
 " Map, 222  
 BURRELL, B. A., 282, 292, 302, 321, 468  
 BURROW, J. H., 94  
 Burrowbridge, (*see* Boroughbridge)  
 BURROWS, H. W., 217, 228, 229, 235  
 " W., 211, 212  
 Bursting Rock Surfaces, 205  
 Burstwick, 280, 463  
 " Boulders, 270, 276, 278, 289, 355, 357  
 " Gravels, 338  
 " Rhomb-porphry, 356  
 " Shap Granite, 338, 356  
 Burton Bank, Map, 487  
 BURTON, F. M., 282, 292, 311, 406, 407  
 Burton in Lonsdale, Map, 480  
 BURTON, J., 15, 272, 292, 311  
 " John, 255  
 BURTON, J. J., 377, 408, 424, 437, 444, 449, 458, 459, 468  
 Burton Nat. Hist. Soc., 211  
 BURTON, R. C., 449, 451  
 Burythorpe, Map, 486  
 BUSH, G., 130, 134  
 BUTLER, FRANCIS H., 437  
 BUTTERELL, J. D., 173  
 BUTTERFIELD, A. E., 342, 359, 377  
 Buttershaw, *Cyphaspis*, 230  
 Buttertubs, 430  
 BUTTERWORTH, J., 116, 143  
 Bye Pit, Map, 489, 490, 491  
 Bygone Hornsea 372  
 " Yorkshire, 246  
 Byland, 36, 253, 260  
 Byram, Map, 483  
 Cadeby Colliery, 271, 398  
 " Main Collieries, 262, 300, 310, 319  
 " Upper Coal Measures, 369  
 Calamitæ, 249  
 Calamite, 447  
*Calamites (Calamitina) varians* var. *insignis*, 451  
 " *cannæformis*, 358  
 " Halifax, 279  
 " leaves, 275, 407, 445, 447  
 " organisation of, 127  
 " *regularis*, 224  
 " Roots, 279, 290  
 " Structure, 265, 275  
*Calamocladus*, 445  
 " *grandis*, 420  
*Calamostachys binneyana*, 265, 407, 420, 428  
 " Halifax, 279  
 Calcaire Carbonifère, 198, 206  
 Calcareous Algæ in Rocks, 459  
 " Concretions, 405  
 " Grit, Pickering, 302  
 " " Sponges, 232  
 " " Starfish, 69  
 " " Structure, 74  
 " Jottings, Craven, 191  
 " Nodules, Section of, 325  
 " " Coal, 386, 388  
 " " Coal, Spores in, 364  
 " Rocks, Formation of, 70  
 Calcite in Coal, 467  
 Calcium Carbonate in Fossil Shells, 437  
*Caloceras belchevi*, 424  
 " *convolutum*, 424  
 Calder, 43  
 " Drift, 142  
 " Pollution of, 133  
 " River, 183  
 " Valley, 153, 157, 158, 476  
 " " Boulders, 60, 63, 143, 163  
 " " Glaciation, 349

- Calder Valley, Millstone Grit, 318  
 " Yoredales, 318  
 Calderdale, 427  
 " Boulders, 163, 259  
 " Geology of, 278  
 Calf Hole Cave, 266, 369  
 CALKER, F. T. P. VAN, 272  
*Callograptus carboniferus*, 392  
 Calverley, 239, 242  
 " Map, 483, 498, 499  
 " Wood Quarries, 210  
 CALVERT, —, 48  
 " E., 311, 321  
 " M., 38, 53, 65, 67  
 Cam Fell, 359  
 " Map, 494  
 Cambrians, Ewecross, 228, 241  
*Cambridge*, 20, 83, 245, 252, 253, 261,  
 274, 306, 307, 310, 343, 349, 401,  
 422, 431, 435, 442, 444, 445, 448,  
 453, 462  
 Cambridge Botanical Museum, 268, 278  
 " Boulders, 415  
 " Jurassics, 252, 253  
 CAMDEN, } W., 1, 2, 11  
 CAMBEN, }  
 CAMERON, —, 269  
 CAMERON, A. C. G., 152, 157, 161, 167,  
 173, 195, 196, 247, 341, 342, 477,  
 479, 480, 491, 492, 493, 494, 495,  
 496, 498, 499, 500, 501, 502  
 CAMPBELL, W., 76, 77  
 Campsall, Map, 501  
 Canidæ, 416  
 Cannel and Affinities, 430  
 " Coal, Fish Remains, 162, 163  
 " " *Cœlacanthus* in, 183  
 Canoe, Ancient, Giggleswick, 98  
 CANTRILL, T. C., 272  
*Capricornis* Zone, 304  
 Car Pot, 424  
*Carbonicola*, Monograph, 263, 275, 284  
 Carboniferous, 268  
 " Aborescent Lepido-  
 dendra, 279  
 " A-re Valley, 235  
 " Algæ, 187  
 " Annelid, 285  
 " Base of, 147, 148, 152  
 " Basement Beds, 241,  
 381, 455  
 " Brachiopoda, 87, 94,  
 99, 162  
 " Changes, 230  
 " Characters of, 344  
 " Chert, 206  
 " " organisms in, 137  
 " Chiton, etc., 111  
 " Classification, 148, 149,  
 428  
 " Committee on, 217  
 Carboniferous Corals, 459  
 " " Revision of, 399  
 " Correlation, 305, 314  
 " " of Lower, 304  
 " Craven Fault, 434  
 " Crinoids, 79, 328, 448,  
 467  
 " Crustacea, 123, 156  
 " *Cyclus*, 270  
 " *Cydonocrinus*, 457  
 " *Cyphaspis*, 230  
 " Deltodus, 330  
 " Dendroid Graptolites,  
 392  
 " Earth Movements, 381  
 " Echinodermata, 105  
 " Entomostraca, 108, 140,  
 184, 187  
 " Faults, Craven, 235  
 " Fauna, 446  
 " Faunal Sequence, 390  
 " " Succession, 420,  
 433  
 " Fenestellidæ, 160, 171  
 " Ferns, 243, 374  
 " " Fructification, 258  
 " " Structure, 258, 383  
 " Fish, Baildon, 136  
 " " Fauna, 386  
 " " Halifax, 129  
 " Fishes, 178, 196, 397  
 " " Distribution,  
 357, 397  
 " Flora, 73, 189, 233, 237,  
 278, 286, 306, 325,  
 334, 335, 344, 446  
 " " and Fauna, 425,  
 449  
 " " and Stratigraphi-  
 cal Classification,  
 391  
 " " Committee, 413  
 " " Halifax, 219  
 " " Yorks., 258  
 " Foraminifera, 143, 187,  
 277  
 " Formation, Coal Re-  
 sources, 454  
 " Fossil Fauna and Flora,  
 439  
 " Fossils, 248, 285, 424  
 " Ganoid Fishes, 338, 396,  
 420, 445  
 " Gasteropoda, 189, 223,  
 392  
 " Geography, 196, 213  
 " Geology, Present State  
 of, 412  
 " " Grassington, 434  
 " " Map, 487  
 " Hellifield, 434

- Carboniferous, *Hypocrinus*, 457  
 " Invertebrate Tracks, 193  
 " Ingleborough, 392, 412  
 " Kettlewell, 392  
 " Labyrinthodont, 121  
 " Lamellibranchiata, 284,  
 295, 305, 312, 314,  
 321, 323, 332, 334,  
 342, 361, 371, 412  
 " Leeds, 242, 249, 320  
 " Life Zones, 283, 305,  
 313, 322, 323, 334,  
 344, 352, 361, 371, 401  
 " Limestone, *See also*  
 Mountain Limestone.  
 " Limestone, 204, 335,  
 359, 409  
 " " Belgian, 206  
 " " Coal Re-  
 sources, 463  
 " " Base of, 207  
 " " Changes in,  
 257  
 " " Cochliodonts,  
 112  
 " " *Conularia*, 395  
 " " Cracoe, 263  
 " " Current Bed-  
 ding in, 344  
 " " Formation of  
 182  
 " " Fossils, 98  
 " " Hyalonema,  
 109  
 " " Memoir, 118  
 " " Microscopical  
 156, 392  
 " " Mines, 119  
 " " Myriapods,  
 208  
 " " Nodules, 354  
 " " North Yorks.,  
 128  
 " " *Platycrinus*,  
 252  
 " " *Prolecanites*,  
 273  
 " " Richmond,  
 343  
 " " Settle, 311  
 " " Sheffield, 428  
 " " Striae on, 297  
 " " Veins in, 121  
 " " Zones, 455  
 " Loughshinny, 403  
 " Lower, Correlation, 313  
 " Lycopods, 215, 224  
 " Macrospores, 146  
 " Marine Beds, 149  
 " Micro-Palæontology,  
 187, 193
- Carboniferous, Mill Gill, Wensleydale,  
 428  
 " Molluscan Zones, 380  
 " *Murchisonia*, 204, 248,  
 273  
 " Nautiloid, 360  
 " Ores, 131  
 " Ostracoda, 159, 197,  
 251, 276, 286  
 " Ostracodons, 190  
 " *Palæoneilo*, 321, 323,  
 314  
 " Pateley Bridge, 396  
 " Plants, 51  
 " " Structure, 138,  
 389  
 " Polyzoa, 151, 160, 166,  
 176, 187, 193, 227, 236  
 " *Producti*, 475  
 " Radiolarians, 166  
 " Reefs, 235  
 " Rocks, Address on, 163  
 " " Airedale, 245  
 " " Base of, 149  
 " " Changes in, 240  
 " " Distribution, 125  
 " " Divisions, 266  
 " " Formation of, 259  
 " " Hull on, 97  
 " Sea, 413  
 " Seed-bearing plants, 374  
 " *Selachii*, 218  
 " Sequence, 396  
 " Sheffield, 428  
 " Sigillaria, 166  
 " Spores, 195  
 " Strata, Leeds, 232  
 " Sub-divisions, 295, 314  
 " Succession, 380, 438,  
 460  
 " Swaledale, 401  
 " Terraces, Origin, 148  
 " Threshfield, 401  
 " Times, Currents in, 90  
 " Tree, 246  
 " *Trepstomata*, 452  
 " Trilobites, 181, 187, 270  
 316, 398, 421  
 " Upper, Relations, 148  
 " Vegetation, 202, 236  
 " " Bradford, 351  
 " " Clayton and  
 Ilkley, 194  
 " Volcanoes, 198  
 " Zones, 274, 281, 285  
 287, 294, 303, 380  
 391, 392, 424  
*Cardiocarpon compressum*, 423  
 CAREY, A. E., 369, 388  
 Carforth Bridge Boring, Map, 491  
 Carlinghow Boring, Map, 489

- Carlisle*, 25, 27  
 Carlton, Map, 494, 500  
 Carlton Borings, Map, 487  
     " Main Colliery, 310  
     " Towers, Boring, 172, 227  
 Carnaby Boulder, 351  
 CARPENTER, P. H., 196  
*Carr. Bull. Soc., Linn., Norm.* 414  
 Carr Naze, Filey, 273  
 CARRINGTON, —, 89  
     " J. T., 272, 302, 311  
 CARRUTHERS, R. G., 399, 424, 459  
     " W., 111, 116, 117, 120,  
     124, 130  
 Carstone, Lincolnshire, 200  
 'Carte Geologique Internationale,' 316  
 CARTER, A., 98, 99  
     " J., 195  
     " R., 113, 147, 182, 188  
     " RICHARD, (Biography), 288  
     " W. LOWER, xxix., 222, 239,  
     255, 262, 271, 272, 279, 282, 292,  
     302, 311, 321, 323, 342, 351, 359,  
     360, 368, 369, 370, 377, 388, 408,  
     413, 424, 429, 437, 439, 449, 459,  
     468  
 CARY, G. S., 24  
 CASE, GERALD O., 468  
 CASH, W., 157, 158, 159, 162, 164, 167,  
     169, 173, 174, 177, 182, 188, 190,  
     203, 212, 229, 237, 262, 282, 292,  
     377, 449  
*Cassell's Magazine*, 176  
 Cassidulidæ Oolitic, 76  
 Castleford, 242  
     " Limestone, 67  
     " Map, 483, 488, 500  
 Castle Howard, Map, 486, 496,  
 Castleton, 469  
     " Map, 492  
 CASTRO, T. DE, 15  
 Catalogue, Bateman Collection, 331  
     " Blastoidea, 196  
     " Books: British Topo-  
         graphy, xxxiii.  
     " " History and Topo-  
         graphy, xxxiii.  
     " Bradford Books, 273  
     " Cornbrash Fossils, 57, 418  
     " Driffeld Museum, 320, 327,  
         335  
     " Earthquakes, 185  
     " Echinodermata, 341  
     " Fossils, 64  
     " Fossil Bryozoa, 284, 313  
     " " Cephalopoda, 213,  
         240, 293  
     " " Fishes, 117, 124, 227,  
         340  
     " " Mammalia, 191  
 Catalogue, Fossil Reptilia, etc., 216,  
     225, 234  
     " " Sponges, 179  
     " " Vertebrata, 237  
     " Gasteropoda, 350, 359  
     " Hull Geol. Soc., Library,  
         456  
     " Hutton Collection, 224  
     " Jurassic Bryozoa, 264  
     " " Gasteropoda, 250  
     " Mesozoic Plants, 326, 331,  
         337, 364, 365  
     " Mountain Limestone  
         Fossils, 55  
     " Oolitic Lamellibranchiata,  
         368, 376  
     " Papers, 350  
     " Phyllocarida, 340  
     " Scaphopoda, 350, 359  
 Catherine Slack, Coal, 65  
     " Map, 487  
 Catterick, Map, 493  
*Caturus*, 261  
 Catwick, Map, 479  
 Cause of Ice Age, 258  
     " Pot Holes, 377, 388  
     " Scenery, 341, 350, 359  
 Cautley, Graptolites, 445  
     " Palæozoics, 430, 441, 457, 461  
     " Salopian Rocks, 434  
 Cave, 37, 38  
     " Earth, 250, 257  
     " Geology of, 179  
     " Hunting, 134, 194, 322  
     " " Yorks., 312  
     " Hyæna, 345  
     " Implement, 369  
     " Man, 130, 463  
     " Oolites, 190, 423  
     " Phenomena, 357  
     " Section, 195  
     " South, 210  
 Caves, 19, 30, 39, 40, 44, 50, 201, 266,  
     341, 415  
     " Boulder Clay in, 429  
     " Boyd Dawkins on, 142  
     " British, 297, 359  
     " Calf Hole, 266, 369  
     " Clapham, 81, 369  
     " Craven, 94, 97, 106  
     " Deposits, 205, 266  
     " Derbyshire, 387  
     " Dowka Bottom (Dowkerbottom),  
         92, 107, 170, 176, 193, 438  
     " Dowker Gill, 209  
     " Elbolton, 224, 233, 242, 243, 246,  
         250, 257, 266  
     " Flamborough, 429  
     " " Boulder Clay in, 429  
     " Formation of, 125  
     " Giggleswick, 145

- Caves, Greenhow Hill, 96  
 " Ha, 135, 145  
 " Ingleborough, 72, 125, 215, 231, 266, 297, 300, 322, 332, 333, 352  
 " Kilnsea Crag, 96  
 " Kirkdale, 69, 74, 134, 193, 250, 258, 264, 345, 403, 415  
 " Mother Shipton's, 302  
 " Moughton, 314  
 " Origin of, 410  
 " Ossiferous, 304  
 " Raygill, 164  
 " Remains in, 145  
 " Remains of Man, 148  
 " Ribblesdale, 314  
 " Settle, 66, 108, 121, 126, 134, 146, 148, 150, 151, 155, 160.  
 " Skipton, 136  
 " Skirethorns, 235  
 " Skoska, 377, 388  
 " Somerset, 387  
 " Stump Cross, 134  
 " Subterranean, 300  
 " Swaledale, 87  
 " Swinsto, 436  
 " Teesdale, 436  
 " Upper Wharfedale, 369  
 " Victoria, 92, 124, 129, 130, 131, 132, 134, 141, 213, 223, 250, 266, 304, 399  
 " Yorkshire, 163, 182, 250, 273, 297, 301, 302, 312, 387, 463
- Caverns, *see* Caves.  
 'Cavernes Anglaises,' 297
- Cavities in Limestone, 78  
 " Magnesian Limestone, 236, 438
- Cawood, 347  
 " Map, 499
- Cawthorne, 416, 472  
 " Boring, Map, 488  
 " Boulders, 345
- CAYLEY, G., 27
- Cayton Bay, Map, 495  
 " Fossil Plants, 462  
 " Ginkgoalian Leaf, 464, 475  
 " Mammoth Tooth, 117
- Cayton Gill Beds, 208
- Celestine, 55  
 " Nidd, 217
- Cells of Fossil Plants, 219
- Cement Beds, Speeton, 312  
 " Manufacture of, 115, 150  
 " Mulgrave, 103
- Centenary of Nineteenth Century Geologist (E. W. Binney), 448
- Cephalopod Gallery, British Museum, 274
- Cephalopoda, Catalogue, 240  
 " Fossil, 213, 293, 302.
- Cephalopoda, in Drift, 433, 456, 464  
 " List of Types, 302  
 " Millstone Grit, 291
- Ceratiocaris*, Dent, 110  
 " *leptodactylus*, 206, 340
- Cervus elaphus*, Doncaster, 378  
 " *see* Red Deer.
- Cestracion*, Chalk, 473
- Cestracionts, Spines, 158
- Cetiosaurus*, 61  
 " *longus*, 63
- Chadwick Museum, 335
- CHADWICK, S., 189, 195, 201, 203, 210, 212, 220, 222, 229, 239, 247, 271  
 " SAMUEL, Obituary, 349
- Chænocaris tenuistriata*, 305, 314
- Chalcedony, 455
- Chalk, Accumulation of, 363  
 " *Actinocamax grossouvrei*, 378  
 " " *plenus*, 375  
 " " *quadratus*, 444  
 " Analysis, 150  
 " and Flint, 196, 256  
 " Barrois on, 157, 142  
 " Belemnites, 384, 455  
 " Belemnoid, 360  
 " Blake on, 152, 157  
 " Boulders, Formation of, 286  
 " Buried Valley in, 328  
 " *Cestracion*, 473  
 " Changes in, 257  
 " Cole on, 177  
 " Contortions, 196  
 " Dales, Origin, 199  
 " Denmark, 285  
 " Denudation of, 332  
 " Destruction, 285  
 " Disintegration, 285  
 " Dislocation, 285  
 " Displaced, Speeton, 371  
 " Divisions of, 266, 458, 461  
 " Driffeld, 445  
 " Dry Valleys, 212  
 " Echinoderms, 123, 309  
 " English and French compared, 56  
 " Fault in, 169  
 " Fauna, 473  
 " Fishes, 403, 405, 446, 454  
 " Flamborough, 288, 445  
 " Fossils, 462  
 " " Bridlington, 116  
 " " preparation, 288  
 " " Preservation of, 363  
 " " Thixendale, 189  
 " Genesis of, 266, 415  
 " Gravel, 185  
 " Heights of, 284  
 " Hessle, 116, 307  
 " History of, 325

- Chalk, Hume on, 266  
 " Inocerami, 447  
 " Irregular Echinoids, 384  
 " Lamplugh on, 286  
 " Lower, Hill on, 214  
 " Markings in, 132  
 " Memoir, 353  
 " Morris on, 180  
 " Microscopic, 408, 445  
 " Pink Flints in, 417  
 " Radiolaria, 275, 451  
 " Red, 120, 133, 181  
 " Rubble, 363  
 " " Land Shells in, 353  
 " Stages in, 451, 458  
 " Ventriculidæ, 70  
 " Water in, 302  
 " Water-line in, 325  
 " Water, Purification of, 360  
 " Water Supply, 160, 316  
 " Willerby, 307  
 " Zones, 257, 277, 355, 364, 377, 381, 404  
 " Zones, Microscopic Structure, 276  
 " Zoophytes, 57, 72  
 Chalky Boulder Clay, 123  
 " " Matrix, 344  
 " Clays, 285  
 Chalybeate Water, 105  
 " Waters (Harrogate), 108, 109, 112  
*Chambers' Journal*, 146, 194, 209, 237  
 CHAMBERS, W., 124  
 " W. and S., 124  
 Champlain Age, 279  
 CHANCE, H. M., 167  
 Changes, Coast, 358, 364, 417 (*see also* Coast Erosion)  
 Changes in Barnsley Coal, 303  
 " Carboniferous Rocks, 230, 240  
 " Course of Hull, 236  
 " Humber, 145  
 " Ironstone, 113  
 " Land and Sea, 193  
 " Pliocenes, 345, 354  
 " Rocks, 257  
 " Spurn Point, 359  
 Changes of Level, 265  
 Chapel Allerton, Map, 484, 499  
 Chapel-le-Dale, 173, 178  
 CHAPMAN, E. H., 425, 430  
 " F., 255, 342, 388, 396  
 " SARAH E., 468  
 " W., 15  
 Characteristic Fossils, 398  
 Characteristics of Earthquakes, 425  
 Characters of Building Stone, 450  
 " Carboniferous, 344  
 'Charbons Britanniques', 325  
 Chariot Burial, 395  
 Charles Pit, Map, 490  
 CHARLESWORTH, C., 67  
 " E., 54, 69, 72, 79  
 Charlesworth's Collieries, 246  
 CHARLTON, L., 19  
 CHARNOCK, J. H., 70  
 Chart, Crustacea, 106  
 " of Humber, dated 1725, 206  
 Charts, 11, 26  
 CHATWIN, C. P., 459, 467, 468  
 Cheadle Coalfield, Fish-bed, 385  
 CHEETHAM, W., 188, 189, 212, 229, 239, 242, 247, 253, 255  
 Chellow Dean, 407  
 " Origin, 430  
 Cheltenham Water, Harrogate, 105  
 " Well, Harrogate, 107  
 Chemical Action on Rocks, 469  
 " Composition of Cleveland Iron, 84  
 " Constitution of Humber Deposits, 81  
*Chemical Essays*, 21, 22  
 'Chemical Manufactures,' 103  
*Chemical News*, 92, 98, 100, 102, 105, 108, 109, 112, 114, 119, 134, 155, 168, 340, 384, 404  
 Chemical Researches, Chalk, 257  
*Chemist*, 61  
 Chemistry of Cleveland Iron, 85  
 Chert, 401  
 " and Flint, 439  
 " Harrogate, 205  
 " Ingleborough, 131  
 " Organisms in, 137  
 " Origin of, 205, 206  
 " Raxella, 393  
*Chesterfield Inst. Eng. Trans.*, 139  
 Cheviot Hills, 332  
 " Porphyrites, 332  
 " Rocks in Drift, 334  
 Cheviots, Glacial Lakes, 334  
 Chew Reservoir, 430  
*Chicago*, 274, 294  
 Chiltern Wind Gaps, 469  
 Chimæroid Fish, North Grimston, 409  
 Chipped Flints beneath Peat, 163  
 Chisholm, G. G., 292  
 Chiton, Carboniferous, 111  
 " Mountain Limestone, 97  
*Chitonellus*, Carboniferous, 111  
 'Chloridal Steel Waters,' 80  
 Chloride of Iron Spring, Harrogate, 115  
 Chlorine and Rainfall, 340  
 " Distribution of, 320, 331, 340  
 " Origin of, 331  
 'Chronicle of Englande,' 1  
 Chronicles of Old Bingley, 308, 366, 375  
 CHURCH, A. H., 107

- Church Garforth, Map, 499  
 " Lane, Map, 487  
*Cicerocrinus elegans*, 328  
 Cidaridæ, Oolitic, 74  
 Cidaris, 6  
 Circulation of Salt, 330, 340  
 " Underground Waters,  
 144, 148, 158, 163, 240  
*Circulator*, 112  
 CLAGUE, D., 203  
 Clapham, 271, 396, 416, 427, 438  
 " Cave, 81, 369  
 " Erratics, 159, 168  
 " Geology of, 401  
 " Glacials, 180  
 " Iron at, 114  
 " Map, 495  
 " Mollusca, 470  
 " Peat, 125  
 CLAPHAM, R. C., 101, 103  
 Clapham, *Saccammina*, 344  
 " Underground Streams, 377  
 CLARK, E. KITSON, 425, 437  
 " J. EDMUND, 142, 143, 157, 167,  
 173, 212, 256, 292, 351  
 CLARKE, F. W., 222  
 " J. A., 152  
 " T. T., 182  
 " W. EAGLE, 173, 182, 186, 189,  
 192, 211  
 Claro Hill, Boulders, 220  
 " " Shap Granite, 303  
 " History of, 126  
 'Class-Book of Geology,' 129  
 Classification of Ammonites, 166  
 " Brachiopoda, 108  
 " Carboniferous, 148, 149  
 428  
 " Crustacea, 72  
 " Glacial Beds, 274  
 " *Ichthyopterygia*, 216  
 " Igneous Rocks, 284,  
 460  
 " Oolites, 215  
 " Palæozoics, 80  
 " Red Rocks, 232  
 " Sedimentary Rocks,  
 373  
 " Slates, 69  
 " Soils, 60  
 " Speeton Series, 288  
 " Stratagraphical, 391  
 " Welsh Strata, 67  
 Classified Index, Organic Remains,  
 Yorks, 426  
 " " Proc. Geol. Assoc.,  
 435  
 " " Yorks. Geol. and  
*Polyt. Soc.*, 351  
 Clastic Rocks, 434  
 Clava, 292  
 Clay, Distribution of, 97  
 " Ironstone, Gallium in, 284, 294  
 " " Origin of, 131  
 " Natural History of, 453  
 " Pits, Leeds, 319  
 CLAY, J. T., 60, 62, 63  
 Claypits, Yorkshire, 331  
 Clays, Chalky, 285  
 'Clays, Shales and Sands,' 453  
 CLAYTON, —., 8  
 Clayton Fossil, 194  
 " Fossil Tree, 194, 197, 199, 202,  
 203, 206, 219  
 " *Stigmaria*, 209, 220  
 Cleasby, Map, 492  
 Cleat in Coal, 466, 471  
 Cleckheaton Boring, Map, 489  
 Cleethorpes, 386  
 CLEMENTS, H., 167  
 Cleveland, 27, 28, 154, 198, 207, 424  
 " Boulders, 362  
 " Cobalt in, 102  
 " Dales, 251  
 " Dyke, 116, 214, 218, 258,  
 404, 440, 450, 451  
 " " Analysis, 395  
 " Fauna of, 410  
 " Fossil Flora, 456, 464  
 " Gallium in, 284, 294  
 " Geology of, 95, 115, 131,  
 167, 211  
 " Glaciation of, 410  
 " Glacier Lakes, 344, 353,  
 362, 381  
 " Hills, 251, 396, 404, 443  
 " History of, 68, 69  
 " Iron, 99, 147, 151, 155  
 " " Chemistry of, 85  
 " " Composition of, 84  
 " " Ore, 77, 208, 224, 399  
 " " Trade, 139, 381  
 " Ironstone, 86, 102, 113, 115,  
 116, 117, 121, 122, 124,  
 127, 136, 137, 139, 142,  
 161, 199, 295, 394, 405,  
 435, 458  
 " Ironstone, Analyses, 433  
 " " Brookite, 363,  
 372  
 " " Composition of,  
 85  
 " " Origin of, 86, 384  
 " " phosphorus in,  
 150  
 " Jurassic Flora, 429  
 " " Plants, 414, 475  
 " Map, 353  
 " Liassic Dentaliidæ, 383  
 " Moors, Origin, 390  
 " Naturalists' Club, 290  
 Cleveland News, 157

- Cleveland, Nickel in, 102  
 „ Rocks, Analyses, 83  
 „ Rock Salt, 122  
 „ Salt, 206, 252, 292  
 „ Salt Industry, 225  
 „ Scenery, 352  
 „ Soil and Vegetation, 418  
 „ Structure of, 114  
 „ Subterranean Water Sheds, 253  
 „ Treatise on, ' 94  
 „ *Trigonia lingonensis*, 140  
 „ Whinstone, 333  
 „ Zinc in, 102  
 Cliff, Buried, 216  
 „ Hilderthorpe, 216  
 Cliffe, 308  
 „ Lias, 124  
 Cliffs and Birds of Bempton, 394  
 „ Yorkshire Coast, 244  
 Clifton, 387  
 Clifton, Map, 489  
 „ Boulders, 256  
 Climate, 343  
 „ and Baths, 274  
 „ and Fossil Plants, 472  
 „ and Health Resorts, 237  
 „ and Time, ' 138  
 „ Harrogate, 170  
 „ North Yorkshire, 99, 211, 376  
 „ Post-Glacial Period, 130  
 „ Scarborough, 179  
 Climatic Changes, 471  
 Climatology, West Yorks., 153, 216  
 Clint, 220  
*Clisiophyllum ingletonense*, 455  
 Clitheroe, 20, 264, 325, 332  
 „ Fossils, 199, 248  
 „ Geology of, 139, 338  
 „ *Melonites*, 341  
 „ Reef Knolls, 430  
 „ *Zaphrentis*, 399  
 Clivinger, Iron Mine, 161  
 CLODD, E., 273  
 CLODEN, J. V., 358, 360  
 Cloud-burst, 306  
 „ Langtoft, 252  
 „ on Wolds, 425  
 „ (See Waterspout)  
 CLOUGH, C. T., 143, 152, 154, 162, 351, 479, 480, 491, 492, 493, 494  
 „ S., 247, 253  
 Cloughton, 45  
 „ Corals, 329  
 „ Map, 491, 493  
 Coal, 34, 36, 39, 40, 41, 42, 44, 45, 50, 223, 226, 250  
 „ Absorption of Oxygen, 476  
 „ Adwalton, 430  
 „ „ Stone, 331  
 Coal, Analyses, 83, 269, 340, 342, 350, 390  
 „ and Coal Dust (Garforth collection), 452  
 „ and Coal Mining, Geology of, 400  
 „ Ankerite in, 447, 449  
 „ Bacteria in, 462  
 „ Balls, 385, 388, 396, 397  
 „ „ *Calamostachys*, 428  
 „ „ Composition, 192  
 „ „ Distribution, 397, 405  
 „ „ Formation, 396, 397  
 „ „ Halifax, 143, 354  
 „ „ Origin of, 405  
 „ „ Yorks., 369  
 „ Barnsley, 88, 244, 251, 399  
 „ „ Map, 487, 488  
 „ Blackshale, 282  
 „ Boring for, 149, 466  
 „ Boulders in, 208, 212, 226, 245  
 „ Boulsworth, 110  
 „ Bradford, 270, 323, 451  
 „ Brodsworth, 399  
 „ Calamites, 451  
 „ Calcite in, 467  
 „ Changes in, 303  
 „ Cleat in, 466, 471  
 „ Commission, 123, 350, 373  
 „ Composition of, 345  
 „ Concretions, 405  
 „ „ Origin of, 348  
 „ (*Cælacanthus*), 348  
 „ Coprolites in, 65  
 „ Cutting, 101, 124  
 „ „ Kippax, 104  
 „ Denudation, 382  
 „ Deposition of, 91  
 „ Deposits of Britain, ' 135  
 „ Depth of, 233  
 „ Discovery of, 56  
 „ Duration of, 179  
 „ Economical Working, 126  
 „ Equisetum, 251  
 „ Extension of, 83  
 „ Ferns, Fructification, 215  
 „ Fish, Distribution, 168  
 „ „ Fauna, 330  
 „ „ Remains, 59, 87, 148, 153, 158, 162, 163, 230, 240, 247, 326, 330, 337  
 „ Flockton, 150  
 „ Flora, 394  
 „ „ Halifax, 157  
 „ „ Ingleton, 448  
 „ Formation of, 245, 405  
 „ „ Theory of, 389  
 „ Fossil Exuvæ in, 68  
 „ „ Fructification, 212  
 „ „ Flora, 296  
 „ „ Fungi, 162  
 „ „ Insects, 110



- Coal, Fish Plants, 182
- "    "    Stump, 413
- "    "    Wood, 107
- Fossils, 465
- "    Halifax, 169, 309
- Gas in, 145
- Geology of, 134
- Goole, 172
- Gorple, 110
- Haigh Moor, Map, 488
- Halifax, 177, 230, 258, 323
- "    Flora of, 190
- "    Hard Bed, 146, 150, 331
- "    Structure, 124
- History of, 155
- Hunslet, 194
- Industries, 170, 175
- Lecture on, 113
- Leeds, 194, 197, 242, 323, 412
- Lepracanthus*, 326
- Low Moor, 112
- Marine Bands, 375, 399, 409, 412, 437
- Marine Fossils, 425
- Measures, Mollusca, 385
- "    Plants, 279, 315
- "    Seed, 423
- "    *Anthracomya*, 257
- "    *Anthracopectera*, 257
- "    Fishes, 318
- "    Flora, 324, 334
- "    Bone Bed, 143
- "    Brine in, 183
- "    *Cælacanthus*, 339
- "    Fishes, 339, 346
- "    Fossil Shells in, 91
- "    Goniatites, 201
- "    Halifax, 405
- "    *Lepracanthus*, 318
- "    Lithology, 145
- "    Pontefract, 390
- "    Sections in, 375, 390
- "    Sheffield, 282, 428
- "    Succession below, 380
- "    Trees in, 219
- "    Upper, in Yorks., 369
- "    'Washouts,' 373
- Megalichthys*, 185, 191
- Microscopic, 452
- Microscopic Examination, 440, 471
- Middlesbrough, 253
- Millstone Grit, Junction of, 410
- Mines, Explosions, 188
- Mining, 97, 142, 388, 452, 455
- "    Ancient, 204
- "    Annals, 283, 293, 303, 313, 333, 343, 361
- "    Halifax, 193
- "    History of, 174
- "    Principles and Practice of, 385
- Coal Mining, Rowley on, 126
- "    Mirfield, 215
- "    Natural History of, 435
- "    Nautilus in, 65, 71
- "    Nevison's Farm, 104
- "    Nodules, 388
- "    Distribution of, 386
- "    Formation of, 386
- "    Spores in, 364
- Oolitic, 135
- Origin of, 193, 332, 392
- Output, 301
- Paraffin from, 449, 452
- Pebbles in, 214
- Permians, 272
- Physical Properties, 232
- Plant Anatomy, 315
- Plants, 73, 113, 127, 143, 181, 243, 249, 290, 305, 407, 428, 446
- Plants, Binney Collection, 326
- "    Collecting of, 377
- "    Halifax, 169, 174, 227, 236, 284, 295, 354
- "    North Oram, 104
- "    Organisation, 127, 156, 166, 172, 259, 260, 269
- "    Photos, 407
- "    Relationship, 191
- "    Structure, 130, 132, 138
- "    Williamson's Memoirs, 269
- "    Xerophytic Characters, 392
- Relative Ages, 93
- Reserves, British, 470
- Resin in, 153
- Resources, 383, 454, 463
- "    Great Britain, 102, 456, 464
- Resources of the World, 456
- Rhadinichthys*, 330
- Rotherham, 118
- Saddleworth, 176
- Seams, and Coal Balls, 385
- "    Correlation of, 214
- "    Barnsley, 151
- "    Formation of, 223
- "    Leeds, 89
- "    Order of, 58
- "    Sections, 121
- Silkstone, Map, 487
- Steam, 70, 414
- Stears on, 245
- Story of, 287
- Strata, Sections, 466
- Strepsodus*, 330
- Structure of, 193, 447, 457
- Supplies, Royal Commission on, 358, 368, 370, 379, 390

- Coal, Thinning out, 283  
 „ Thirsk, 104  
 „ Trade, Annals, 283, 293, 303,  
 315, 333, 343, 361  
 „ Tree Forms, 130  
 „ Upper and Lower Beds, 98  
 „ Variation in Thickness, 139  
 „ Working of, 233  
 „ Worsborough, 149  
 „ Yorkshire, 144, 396  
 „ „ and Newcastle, 93  
 Coalbrookdale, 15  
 Coalfields, Barnsley, 113, 252  
 „ Concealed, 368, 372, 426,  
 438, 440, 456, 460  
 „ Bradford, 172  
 „ Derbyshire, 400, 426  
 „ Development of, 132  
 „ Doncaster, 416  
 „ Duration of, 92, 321  
 „ Extension of, 51, 76, 112,  
 277, 283  
 „ Extension of Yorks., 381  
 „ Fish Bed in, 385  
 „ Fishes, 129  
 „ Hidden, 393  
 „ History of, 92  
 „ Huddersfield, 172  
 „ Ingleton, 400, 426, 448  
 „ Kent, 467  
 „ Leeds, 204, 214  
 „ Leicestershire, 464  
 „ Limits of, 274, 381  
 „ Map, 50, 325  
 „ Midland, 393  
 „ Mineral Aspects, 147  
 „ Minerals, 149  
 „ Monckton Main, 147  
 „ Murchison on, 112  
 „ New Eastern, 426  
 „ New Yorkshire, 104, 227,  
 228  
 „ Notts., 400, 426  
 „ of Great Britain, 92, 95,  
 131, 169  
 „ Plan of Yorks., 68, 476  
 „ Plants, 326  
 „ Section of, 58, 59, 456, 476  
 „ Shells in, 61  
 „ South Yorkshire, 130, 164,  
 182, 281  
 „ Yorkshire, 55, 70, 88, 118,  
 144, 175, 237, 284, 299,  
 300, 322, 400, 420, 426  
 „ Yorkshire, Diagram of, 476  
 „ Yorkshire, Map, 466  
 Coast Boulders, 232, 233, 276, 278,  
 280, 299, 306, 329  
 „ Changes, 358, 364, 407, 417  
 „ „ Bibliography, xxvi.,  
 200, 273, 290  
 Coast Changes, East Yorks., 443  
 „ „ Hornsea, 454, 463  
 „ „ Robin Hood's Bay,  
 465  
 „ Erosion, 19, 32, 37, 59, 79, 95, 98,  
 119, 136, 146, 150,  
 155, 161, 177, 193,  
 230, 237, 247, 251,  
 256, 261, 281, 286,  
 288, 327, 331, 349,  
 358, 364, 367, 369,  
 373, 376, 382, 388,  
 394, 415, 418, 423,  
 430, 438, 449, 452,  
 454, 458, 461, 471,  
 474  
 „ „ Aldborough, 441  
 „ „ Commission, 387, 435  
 „ „ Committee, 256, 337,  
 444  
 „ „ Dimlington, 403  
 „ „ Prevention of, 418  
 „ „ Spurn, 302, 304  
 „ „ Whitby, 473  
 „ Glacials, 284  
 „ Guide, 287  
 „ Protection, 382, 452, 461  
 „ Redcar and Saltburn, 293  
 „ Relations of, 451  
 „ Sand-Dunes, 468  
 „ Sections, 272  
 „ Shelly Glacial Beds, 296  
 „ Yorkshire, 362  
 'Coasting Pilot,' 11, 13, 20  
 Coatham Water, 168  
 Cobalt in Cleveland, 102  
 Cochliodont Teeth, 112  
*Cochliodont compactus* (Carb. limestone),  
 112  
 COCKBURN, WILLIAM, 117, 120, 128  
 COCKERELL, THEO. D. A., 195  
 Cockles, 41, 42, 43  
 Cocklesbury, 42  
 Codbeck, Map, 485  
 'Codd, MSS,' 4  
 Codfish remains in gravel, 418  
*Cœlacanthus* in Coal, 348  
 „ *phillipsii*, 230  
 „ *tingleyensis*, 183, 339  
 COHEN, J. B., 449, 450, 452  
 COIGNOU, MISS, 230  
 Coke, Analyses, 340, 342, 350, 390  
 COKE, G. E., 282  
 COLE, C. N., 418  
 „ E. M., 42, 45, 157, 177, 182, 195,  
 202, 210, 212, 220, 222, 230,  
 238, 239, 240, 242, 243, 255,  
 256, 262, 263, 273, 282, 302,  
 311, 321, 332, 351, 425  
 „ E. M. (Obituary), 443, 454  
 „ G. A. J., 388, 408, 437, 440

- COLE, J., 39, 40, 42, 43, 45, 49  
 COLEMAN, J., 168  
*Collectanea Antiqua*, 66  
 Collecting Coal Plants, 377  
 COLLIER, CHARLES, 99, 114  
     C. V., 388  
 Collieries, 271  
     " Cadeby, 398  
     " List of, 28  
     " Map of, 261  
     " near Halifax, 61  
     " Sections of, 235  
     " Yorkshire, 291, 300, 301, 310  
 Colliery Explosion, 86  
*Colliery Guardian*, 99, 114, 127, 132,  
     135, 139, 141, 142, 147, 149,  
     151, 152, 181, 182, 223, 227,  
     228, 237, 238, 244, 246, 261,  
     267, 271, 273, 280, 282, 283,  
     291, 293, 295, 300, 301, 303,  
     305, 310, 322, 333, 340, 342,  
     343, 350, 368, 370, 373, 379,  
     390, 400, 409  
     " Orgreave, 467  
 COLLINGWOOD, W. G., 437  
 COLLINS, G., 11, 13, 20  
 COLLINSON, E. B., 273  
 Colne, Gravels, 147  
 Colouration in Fossil Shells, 393  
 Colton Boring, Map, 491  
 COLWALL, D., 7  
 Comatula, 36  
 COMBER, C. T. THORNTON, 292, 302  
 Commercial Aspects of Geology, 250  
     " Products of Yoredales, 363  
     " Uses of Peat, 339  
 Commission on Coal, 123  
 Committee on Coast Changes, 358  
 'Common British Fossils,' 150, 192  
 Comparative Geology, 277  
 Comparisons, Jurassic Floras, 431  
 Composition of Igneous Rocks, 460  
     " Bradford Moor Water,  
         91  
     " Coal Balls, 192  
     " Coals, 345  
     " Cleveland Ironstone,  
         85  
     " Felspars, 305  
     " Limestones, 71  
     " Malham Waters, 321  
     " Past Floras, 355  
     " Peat, 460  
     " Permian Limestone,  
         440  
     " Rocks, 345  
     " Spa, Knaresborough,  
         302  
*Comptes Rendus Acad. Sci. Paris*, 287  
 Concealed Coalfields, 368, 372, 426,  
     438, 440, 460  
 Concealed Coalfields, Nottingham-  
     shire, 456  
     " " Yorks., 456  
 Concrete, Treatise on, 119, 160  
 Concretion, Lias, 288  
 Concretionary Nodules, 396, 397  
 Concretions, Analyses, 200, 208  
     " in Clay, Filey, 285  
     " in Coal, 405  
     " " Origin of, 348  
     " Nodular, Halifax, 354  
 Concurrent Faulting, 235  
 Cone of *Bothrodendron mundum*, 405  
     " *Calamostachys*, 420  
 Cones, Lycopodiaceous, 307  
 Configuration of Calder Valley, 153  
     " Holderness, 302  
 Conglomerates, Limestone, 279  
     " Moughton Fell, 216  
     " Permian, 254  
*Congres Geologique International*, 211,  
     213, 215, 217, 218, 219, 241, 244,  
     269, 461  
 Conifera, Fossil, 51  
 Coniferous Fruits, Haiburn Wyke, 116  
*Coniopteris hymenophylloides*, 445  
 Conisborough, 240, 253, 342, 407  
     " Limestone, 67  
     " Map, 482, 483, 502  
     " Upper Coal Measures,  
         369  
 Coniston Boulders, 300  
     " Grit (*Ceratiocaris*), 110  
     " Limestone, 248, 252  
     " " *Halycites*, 451  
     " Moor, Map, 496  
 CONSTABLE & Co., xxxii.  
 Constituents of Stratified Rocks, 124  
 Constitution of Grits and Sandstones,  
     170  
 Construction of Harbours, 290  
 Contact Metamorphism, 276  
     " Rock, Falcon Clints, 276  
     " Rock, Whin Sill, 305  
*Contemporary Review*, 258  
 Contents of Gravels around Hull, 317  
 Contorted Drift, 76  
 Contortions, Experiments, 118  
     " Chalk, 196  
     " Mountain Limestone, 118  
     " Rock, 129  
     " Scalby, 300  
 Contour of Scandinavia, 295  
 Contributions to Fossil Botany, 1870,  
     124  
*Conularia quadrisulcata*, 395  
*Conularia*, British, 395  
 CONWENTZ, H., 282  
 CONYBEARE, W. D., 38, 49, 51  
 COOK, J. TRAVIS, 230, 236  
     " " see TRAVIS-COOK, J.

- COOKE, J. H., 282  
     " G. A., 29  
 COOPER, B., 70, 71  
     " A. N., 459  
 Copgrove, Map, 496  
 Copley, Glacials, 362  
 Copper, 28, 41  
     " Mining, 455  
 Copperas, Manufacture of, 61  
 COPPERTHWAIT, H., 162  
 Coprolite, Lias, 79  
     " Coal, 65  
 Coral Perforate, 285  
     " Rag, 135, 154  
     " " Fish, 409  
     " " *Gyrodus*, 389  
     " " *Madreporia*, 180  
     " Reefs, 113, 207  
 Corallian Beds, *Strophodus*, 439  
     " Malton, 217  
     " Rocks, 147, 207  
     " Oolite, 135, 154  
     " " *Asteracanthus*, 437  
     " " Fossils, 215  
     " " *Isodonta* in, 86  
     " " Malton, 71  
 Corals, Carboniferous, 399, 459  
     " Cloughton, 329  
     " Cretaceous, 128  
     " Fossil, 107, 121  
     " Liassic, 128  
     " Malton, 329  
     " Mesozoic, 329  
     " Monograph, 74, 75, 128  
     " Mountain Limestone, 75  
     " Oolitic, 128, 461  
     " Permian, 75  
     " Scarborough, 226  
     " Speeton, 329  
     " Tertiary, 128  
*Corax falcatus*, 446  
 CORBETT, H. H., 292, 296, 302, 321,  
     342, 351, 378, 389  
*Corbula angulata*, 405  
*Cordaites*, 253  
     " Barnsley, 358  
*Cordiales*, 431  
 CORDEAUX, J., 182, 222, 293, 296, 312  
     " JOHN (Obituary), 316  
 Cornbrash, *Asteracanthus*, 426  
     " Bryozoa, 284  
     " Curious Oysters in, 125  
     " Fauna, 368, 388  
     " Fossils, 56, 378, 418  
     " " List, 57  
     " *Isodonta*, 86  
     " Mollusca, 100  
     " Polyzoa, 260  
     " Proboscina, 260  
     " *Pseudomelania*, 413  
     " Scarborough, 282, 393  
 Cornbrash, Stomotopore, 260  
     " *Strophodus*, 207  
 CORNISH, VAUGHAN, 425  
 Correlation of Carboniferous, 305, 314,  
     403  
     " Carboniferous Lower,  
         304, 313  
     " Coal Seams, 214  
     " Drift Beds, 164  
     " Glacial Beds, 130  
     " Jurassics, 123, 167, 207,  
         424  
     " Leicestershire Coalfield,  
         464  
     " Lias Zones, 156, 160  
     " Neozoics, 431  
     " Pleistocene Deposits,  
         213  
 Corresponding Societies, List of Papers,  
     xxxi., 340, 350, 406, 422, 435, 457,  
     466  
 COSSMANN, M., 293, 312, 321, 332, 334,  
     342, 344  
 Costa, Lake Dwellings, 302  
 Cote d'Or, 123  
 Cotherdale, Map, 493  
 Cotherstone Boulders, 304  
     " Map, 491  
     " Moor, Map, 480, 492  
 COTSWORTH, M. B., 378  
 Cotteswold Hills, 86, 449  
     " Oolite and Lias, 85  
 Cottingham, Boulders, 262  
     " Map, 500  
 COULTAS, F., 293  
 Coums, Origin of, 139  
 Counties, Geology of, 401  
*Counting House*, 250  
*County Blue Book*, 319, 323, 330  
 County Clare, 409  
 'County Companion,' 161  
*Court Guide*, 323, 330  
 Cousins Pit, Map, 489  
 Cove, Malham, 323  
 Cowthorpe, 14, 352  
     " Map, 498  
 COWTON, THOMAS, 111  
 COX, HERBERT, 263  
     " HERBERT S., 425, 426  
 Coxley Valley, 142  
 Coxwold, 253, 260, 273, 341, 343, 344,  
     368  
     " Boulders, 353  
     " Fossils, 275  
     " Map, 495  
 Cracoe, 230, 263  
     " *T. abulipora*, 452  
 Crag, Bridlington, 57, 85, 89, 103, 123,  
     140, 152, 175, 177, 178, 363  
     " Foraminifera, 108, 286  
     " Mollusca, 71, 137, 469

- Crag Mollusca, Monograph, 78, 130  
 Cragg Hill, *Halycites*, 451  
 CRAIG, STIRLING, 437  
 Crambe, Map, 496  
 Crambeck, 221  
 CRAMPTON, C. B., 389  
 Cranswick, Map, 498  
 Crathorne, Map, 492  
 CRAVEN, C., 21, 26, 30, 421  
 Craven, Anticlinals, 114  
 " 'Calcareous jottings,' 191  
 " Carboniferous Faults, 235, 434  
 " Caves, 94, 97, 106, 107, 176  
 " Curiosities, 73  
 " Denudation, 322  
 " Distribution of Plants, 89  
 " Fault, Map, 485  
 " Faults, 235, 279, 381, 434, 436, 455  
 " Geology of, 128, 138, 154, 156, 434  
 Craven *Herald*, 246, 252  
 Craven Highlands, 253, 284  
 " Hills, 135  
 " History of, 154, 156  
 " Knolls, 312, 316, 386, 397, 430  
 " Limestone, 67, 248  
 " " Cavities, 78  
 " Limestones, Structure, 397  
 Craven *Naturalists' Society*, 246, 252, 253  
 Craven, Palæozoics, 175  
 " Quarries, 466, 472  
 " Reef Knolls (*see* Craven Knolls)  
 " Scenery of, 54, 113, 253  
 " Swallow Holes, 184  
 " Underground Waters, 314, 322, 332  
 Cresswell Crags, Mammals, 148  
 'Cretace Inferieur de la Russie,' 336  
 Crétacées, Russie, 225  
 Cretaceous Brachiopoda, 75, 81, 134  
 " Bryozoa, 313  
 " Corals, 128  
 " Divisions, 329  
 " Echinodermata, 103, 123, 127, 137  
 " Entomostraca, 73  
 " Flora, 464  
 " Fossils, 219  
 " " Aberdeenshire, 297, 298  
 " " from Drift, 453  
 " " Morseat, 288, 305  
 " Inocerami, 446  
 " Lamellibranchia, 319, 340, 349, 352, 358, 367, 375, 386, 397, 405, 421, 446, 456, 459, 465  
 " Madreporaria, 318  
 Cretaceous Nomenclature, 218  
 " Nuculidæ, 184  
 " Phosphatic Beds, 363  
 " Rocks, 222, 246  
 " " of Britain, 331  
 " " Memoir, 324, 353, 362  
 " Rostellariæ, 106, 109  
 " South of Scarborough, 361  
 " Sponges, 296  
 CREWDSON, G., 212  
 CREYKE, R., 67  
 CRICK, G. C., 230, 231, 262, 263, 282, 293, 302, 360, 364, 378, 425  
 Crigglesstone Cliff, Map, 488  
 Crimsworth Dean, 222, 226, 339  
 " Fossil Fish, 346  
*Crinoidea*, 36, 328  
 Crinoids, Carboniferous, 79, 328, 467  
 " Fossil, 457  
 " Palæozoic, 88  
 Crocodile, Fossil, 457  
 " Whitby, 54  
 Crocodilia, Fossil, 193  
 Croft, 17, 21, 44  
 " Map, 492  
 " Spa, 237  
 CROFTS, W. H., 262, 293, 302, 312, 321, 332, 342, 351, 378, 381, 425, 429  
 CROLL, J., 138  
 Croll's Hypothesis, 127  
 Cromer Cliff, 294  
 Cronkley Fell, 162  
 " " Map, 491  
 " " Carboniferous, 152  
 " Lamprophyres, 249  
 " Scar, Map, 480  
 'Conkley, Tom o', 310  
 Crofton, Map, 494  
 CROOK, T., 449  
 Cross Bank Colliery, Map, 489  
 " Fell, 28, 248  
 " Fell, Peat, 402  
 " Flats, Map, 489  
 Crossgates, Map, 490  
 CROSSKEY, H. W., 133, 134, 138, 143, 162, 168, 173, 177, 182, 185, 203, 212, 222, 230, 240, 247, 256, 262, 267  
 CROSSLAND, CHAS., xxxiv., 342, 360, 437, 449  
 CROSSLEY, W., 113, 117  
 Crossopterygian Fishes, 467  
*Crossothea fimbriata*, 215  
 Crosspool Boulders, 372  
 Crow Coal, 270  
 CROWDER, W., 84, 85  
 Crowhill, 39  
 Crowle, 389  
 " Moor, Map, 501  
 CROWTHER, H., 312, 449

- Crustacea, Carboniferous, 123  
 „ Classification, 72  
 „ Fossil, 151, 156  
 „ Oolites, 115  
 „ Monograph on, 99  
 Crustaceous, Decapod, 195  
 „ Palæozoic, 127  
 Crummock Lake Deposit, 186  
 Crummockdale, 194  
 CRUMP, W. B., 321, 360  
*Cryptocleidus*, Brough, 327  
 Crystals of Celestine, 217  
*Ctenacanthus minor*, 158  
*Ctenodus* Bones, 170  
 Cudworth, Map, 501  
 CUDWORTH, W., 293, 351, 389  
 „ WILLIAM, Obituary, 376  
 „ W. J., 152  
 Cullingworth, Mounds, 421  
 Culm, Equivalents, 412  
 Culpin Collection, 465  
 CULPIN, H., 369, 370, 378, 379, 399,  
 410, 425, 428, 437, 449, 468  
 „ HENRY (Obituary), 463  
 CUMBERLAND, G., 39  
 Cundale, Boulders, 210, 222  
 Cup and Ring Markings on Boulders,  
 229  
 CURLEY, TIMOTHY, 92, 99  
 Current Bedding in Carb. Limestone,  
 344  
 Currents in Carboniferous Strata, 90  
 CURRY, J., 94, 111, 147  
 Curved Strata, Draughton, 220  
 Curwell, Boring, Map, 490  
 Cusworth Boulders, 302  
 „ Dolerite Boulder, 321  
 „ Fault, 378  
 CUTTRISS, S. W., 256, 301, 302, 312,  
 322, 332, 351, 409  
 CUVIER, 41  
*Cyathaxonia*, 459  
 Cycadian Fruit, Gristhorpe Bay, 117  
 „ Fruits, Runswick, 111  
 Cycads, Fossil, 120, 405  
 Cycloidal Chalcidony, 455  
*Cycloptychius carbonarius*, 445  
*Cyclopteris*, Barnsley, 217  
 Cycylus, 259  
 „ Carboniferous, 270  
 „ *wordwardi*, 270  
*Cydonocrinus parvulus*, 457  
*Cymbites subcarinatus*, 262  
 Cynocephala, 86  
*Cyphaspis*, Buttershaw, 230  
*Cyphosoma konigi*, 123  
*Cypridinadæ*, 140  
 „ Carboniferous, 184  
*Cyprinidæ*, 135  
*Cypris concentrica*, 52  
*Cyrena fluminalis* near Hull, 95  
*Cyrtoceras cornu-bovis*, 331  
 D —, T. C., 203  
 D'Archiae, E. J. A., 56  
 DA COSTA, E. M., 15  
 Dacre Banks, Map, 496  
 Dactili, Idæi, 6  
*Dadoxylon*, 253  
 Dadoxylon Wood, 346  
 Dairycoates, Borings, 355  
 DAKYNS, J. R., 117, 118, 120, 121, 124,  
 125, 128, 130, 134, 138,  
 139, 148, 149, 152, 153,  
 154, 157, 158, 159, 160,  
 162, 168, 173, 178, 189,  
 195, 196, 212, 218, 222,  
 223, 225, 226, 230, 231,  
 235, 236, 240, 247, 263,  
 312, 322, 332, 338, 351,  
 360, 477, 478, 479, 480,  
 483, 484, 485, 486, 487,  
 492, 493, 494, 495, 496,  
 497, 498, 499, 500, 501,  
 502  
 „ JOHN ROCHE (Obituary), 429,  
 440  
 Dale Dyke Reservoir, 106  
 „ End, Map, 498  
 Dales, Glaciation of, 159  
 „ Origin of, 199  
 „ Tour in, 229  
 „ Visit to, 173  
 „ West Yorkshire, 451  
 „ Yorkshire, 161, 320, 380, 446  
 DALLAS, W. S., 168, 171  
 DALTON, A. C., 410  
 „ W. H., 128, 152, 154, 158,  
 222, 223, 478, 480, 483,  
 484, 486, 494, 495, 496,  
 497, 499  
 Dame Pit, Map, 490  
 DAMES, W., 256, 263, 265  
 DANA, —, 450  
 Danby, 246  
 „ British Habitations, 316  
 „ Dale, Map, 493  
 „ in Cleveland, 238, 387  
 „ Map, 485  
 „ Moor, 316  
 „ Moor, Map, 492  
 „ Moor Pits, 94  
 „ Wiske, Map, 493  
 Dane's Dyke, Sponges, 296  
 DANFORD, C. G., 378, 389  
 DANIEL, —, 101  
*Danmarks Geologiske Undersogelse*, 415  
*Dansk Geologisk forening*, 461  
 Darfield, Fossil Plants, 165  
 „ Fossils at, 184  
 „ Map, 501  
 Darley Dale, Map, 482

- Darlington, 26, 27, 301, 335  
*Darlington*, 44, 102, 185, 229, 297, 306, 315, 320  
 Darlington, Geology of, 102  
 " and Teesdale Nat. Field  
 Darrington, Map, 500 [Club, 297  
 Dartford Heath, 393  
 Darton Boring Map, 488  
 " Map, 483, 501  
 DAUBENY, C., 46, 54, 56, 57, 65, 67  
 " C. G. B., 67  
 DAUBREE, A., 124, 203  
 DAVIDSON, T., 69, 73, 75, 76, 77, 81, 87, 94, 99, 117, 124, 134, 143, 152, 162, 182  
 DAVIES, A. M., 360, 366  
 " A. MORLEY, 409  
 " D. C., 148  
 " E. B., 389  
 " ROBERT, xxxiv.  
 " R. V. F., 173, 178  
 " W., 124  
 DAVIS, J. W., xxix., xxxi., 143, 148, 153, 154, 157, 158, 162, 163, 164, 168, 173, 174, 178, 179, 183, 189, 196, 203, 210, 212, 213, 218, 223, 230, 240, 242, 247  
 " JAMES WILLIAM, Obituary, 262  
 " PAUL, 293, 299, 302  
 " R. H., 107, 131, 134, 168, 183, 189, 223,  
 " W. M., 273  
 DAVISON, C., 240, 312, 360, 369, 378, 399, 425  
 DAWKINS, W. BOYD, 104, 105, 106, 107, 109, 111, 117, 119, 121, 124, 125, 131, 132, 134, 142, 144, 148, 153, 163, 189, 196, 213, 231, 235, 302, 360, 389, 425  
 " WILLIAM BOYD (Memoir),  
 DAWSON, ALFRED, 251 [406  
 " J. W., 213  
 DEANE, E., 2, 3, 13  
 Dearne Side, Map, 488  
 " Valley, Boulders, 295  
 " Valley, Glaciation of, 359, 377  
 Decapod Crustaceans, 195  
 DEELEY, R. M., 213, 256, 265, 275, 409, 469  
 DE FONTIBUS, 8  
 DE LA BECHE, H., 47, 48, 51, 54, 57, 70, 71, 72, 74, 76  
 DE LA PRYME, ABRAHAM, Diary, 121  
 DE LUCE, M., 29  
 DE RANCE, C. E., 131, 139, 144, 148, 153, 158, 163, 168, 174, 176, 178, 183, 196, 213, 223, 231, 240, 248, 256, 263, 273, 293, 312, 478, 479, 482, 493  
 Deep Car, Geology of, 293  
 " Map, 502  
 " Mining, 150  
 " Sea erosion, 358  
 Deer, Antlers, Hornsea, 307  
 " Fallow, Goole, 254  
 " Remains, Skipsea, 228  
 Deer's 'Horns,' 14  
 Deformed Belemnite, 387  
 Degradation of Coast, 79  
 DEL BAYS, G. E., 69  
 Delineation of Strata, 31, 32  
 Delta Deposits, Pickering, 383  
*Deltodus*, Yoredales, 330  
 DEMAINE, M., 248  
 Denaby Collieries, 262  
 " Main, 246  
 " " Map, 487  
 " " Sanitation, 370  
 Denbighshire, 380  
 Denby Grange, Boring, Map, 489  
*Denckmannia rudis*, 424  
 Dendroid Graptolites in Carboniferous  
 Rocks, 392  
 DENHAM, H. E., 426, 428, 433  
 Denholme, Map, 499  
 Denmark Chalk, 285  
 DENNING, W. F., 469  
 DENNY, H., 68, 73, 79, 92, 97, 101, 107, 121, 125  
 Denshaw, 236, 254  
 Dent, 44, 364, 365  
 " *Ceratiocaris*, 110, 340  
 " Head Quarries, 205  
 " Map, 493  
 " Phyllopoda, 206  
 " Valley, Sedgwick on, 109  
 Dentaliidae, Liassic, 383  
*Dentalium entale*, 71  
 " *giganteum*, 387, 395  
 " *glabellum*, 388  
 Dentition of *Elephas*, 157  
 " *Pleuroplax*, 230  
 Denton, Map, 498  
 Denudation, 108, 434  
 " Craven, 322  
 " Effects, 202  
 " Flamborough, 197  
 " of Chalk, 332  
 " of Coal, 382  
 " of Limestone, 184  
 " of Rocks, 272  
 " of South Cave, 382  
 " of N. Wales, 333  
 Deposition, 434  
 " Carboniferous, 249  
 " Coal, 91  
 " Lead Ore, 97  
 " Millstone Grit, 278  
 " Warp, 89, 93  
 Deposits, Different Types of, 364

- Deposits of Minerals, 467  
 „ of Rocks, 467  
 Depression, Areas of, 391  
 Depth of Coal, 233  
 „ Collieries, 234  
 Derby, Earthquakes, 369  
 Derbyshire, 476  
 „ Caverns, 387  
 „ Coal, 396, 421  
 „ Coalfield, 368, 381, 400,  
 426, 435, 438, 440  
 „ Concealed Coalfields, 372  
 „ North, 204  
 „ Yoredales, 366  
 Derived cephalopoda in Drift, 456, 464  
 Dermal Teeth, Structure, 72  
*Devoceras impavidum*, 468  
 Derwent Drainage, 76  
 „ Drainage Report, 92  
 „ Map, 482  
 „ Reservoir, 360  
 „ Valley, 283  
 Descente de Rowten Pot, 301  
 Desert Conditions, 393  
 „ „ in Britain, 304  
 „ „ in Trias, 398  
 Destruction of Chalk, 285  
 Determination of Boulders, 272  
 Detritus in Humber, 342  
 Development of *Plesiosaurus*, 208  
 „ Rivers, 273  
 „ Scenery, 306  
 „ *Tragophylloceras los-*  
*combi*, 474  
 „ Yorkshire Coalfield,  
 132  
 Deviation of Bore-holes, 399  
 Devil's Arrows, 1, 10, 11, 13, 17, 21, 22,  
 33, 47, 48, 68, 76, 126, 159,  
 171, 197, 204, 260, 285  
 „ Bolts, 69  
 Devonian Brachiopoda, 182  
 „ Committee on, 217  
 „ Genus, *Palæoneilo*, 314  
 „ Ingleborough, 392  
 „ *Palæoneilo*, 321, 323  
 Dew Ponds, 471  
 Dewlish, Elephant Trench, 461  
 Dewsbury, Boring, Map, 489  
 „ Coal Plants, 261  
 „ *Geol. Surv. Mem.*, 125  
 „ Map, 483, 489, 500  
*Diadema pseudodiadema*, 84  
*Diademadæ*, 89, 123, 127  
 Diagram of Yorkshire Coalfield, 476  
 Diary of A. de la Pryme, 121  
*Diastoporidæ*, 171  
*Diatomaceæ*, at Hull, List, 90, 93, 105,  
 335  
 Diatoms in Peat, 90  
 „ Lake Beds, 335  
 DIBLEY, G. E., 263  
 DICK, A., 84  
 „ A. B., 399  
 DICKENSON, J., 134, 283, 342, 390  
 DICKONS, J. NORTON, xxxiv., 273  
 Dictionary of Harrogate, 176  
 „ Medicine, 176, 269, 348  
 „ Mineral Waters, 92, 173,  
 211, 247, 255  
*Dictyonema*-like Organisms, Pendle  
 Hill, 352  
 Dictyoxylons, Structure of, 130, 132  
*Dictyozamites*, Marske, 355  
 Die Bader Quellen, 139  
 Different Types of Deposits, 364  
 Differential Earth Movements, 381  
 Digest of Evidence, Coal Commission,  
 379  
 „ Coal Supplies, 390  
 Diluvial Currents, 42  
 „ Beds, 78  
 Dimlington, 271  
 „ Boulder Clay, 473  
 „ Boulders, 317, 328, 431  
 „ Erosion, 403  
 „ Rhinoceros Tooth, 422,  
 431  
 „ Shell Beds, 169, 175  
 Dinosaurian Footprints, Whitby, 408  
 Dinsdale, 26, 44, 45  
 „ Spring, Analysis, 209  
 „ Springs, 217  
*Diodontopsodus*, 174  
 Diphtheria, Penistone, 266  
 „ Sculcoates, 152  
*Diplodus*, 162  
*Diplopodia (Pseudodiadema) versipora*,  
 473  
 Directory, North Riding, 413  
 „ of Museums, 439  
 „ West Riding, 402  
 Disappearance of Limestone, 351  
 Discovery of Cleveland Ironstone, 127  
 Disease, Geographical Distribution,  
 139  
 Disintegrating Peat, 415  
 Disintegration of Chalk, 285  
 Dislocation of Chalk, 285  
 Dislocations in Thill, 145  
 Displaced Chalk, Speeton, 371  
 Disposition of Iron, 114  
 Distribution of Arctic Plants, 252  
 „ Boulders, 328, 337, 338,  
 415  
 „ Brachiopoda, 149  
 „ Calcareous Rocks, 125  
 „ Carboniferous Fishes  
 357, 397  
 „ Carboniferous Lime-  
 stone, 182  
 „ Chlorine, 320, 331, 340



Distribution of Clay, etc., 97  
 „ Coal Balls, 397, 405  
 „ „ Fishes, 168, 348  
 „ „ Nodules, 386  
 „ Cretaceous Lamelli-  
 branchiata, 465  
 „ Disease, 125  
 „ Drift, 142  
 „ European Animals, 394  
 „ Fauna and Flora, 68  
 „ Flint, 145  
 „ Fossils, 55  
 „ *Helices*, 433, 444  
 „ Igneous Rocks, 284  
 „ Iron Ores, 114  
 „ Jurassic Fossils, 174  
 „ Jurassics, 86  
 „ Lias Ammonites, 127  
 „ Moorlands, 311  
 „ Ores, 175  
 „ Palæozoic Fossils, 168  
 „ Past Floras, 355  
 „ Plants, Craven, 89  
 „ Plesiosaurs, 171  
 „ Post-Glacial Mammals,  
 117  
 „ *Rhadinichthys*, 330  
 „ *Rhynchonella spinosa*,  
 219  
 „ Roadstones, 313  
 „ Sea Coast, 349  
 „ Soils, 168  
 „ Towns, 292  
 „ Vegetation, 356  
 Disturbances in Valley of Don, 60  
 Disused Quarries, Vegetation of, 393,  
 403, 414  
*Dithyocaris*, Eccup, 314  
 „ *insignis*, 305  
 „ *tenuistriata*, 127, 215  
 Diversion of Nidd Valley, 286  
 „ Wharfedale Stream, 391  
 Divining for Water, 456  
 Divisions of Carboniferous Rocks, 266,  
 295, 314  
 „ Chalk, 458, 461  
 „ Cretaceous, 329  
 „ Lias and Oolite, 221  
 DIXON, J., 75  
 DOBREE, N. F., 189  
 Dod Fell, Map, 494  
 DODDS, GEORGE, 240, 244  
 DODGSON, G., 52, 53,  
 DODSON, T., 47  
 DODSWORTH, R., 4  
 Dodwith Colliery, 246  
 Dogger, 373  
 „ Bank, Shelly Clay, 455  
 „ *Quenstedtia* in, 85  
 Doghill Green, Map, 482  
 Dolerite at Cusworth, 321

Dolomite, Huddlestone, 333  
 Dominancy in Nature, 474  
 Don, Disturbances, 60  
 „ Map, 482  
 „ Pollution of, 133  
 „ River Capture, 359  
 „ River System, Evolution, 377  
 „ Valley, 160, 476  
 „ Valley, Glaciation of, 359, 377  
 DONALD, JANE, 189, 204, 223, 248, 273,  
 302  
 Doncaster, 25, 29, 310, 319, 328, 342,  
 378, 389, 405, 407, 425, 466  
 Doncaster, 34, 208  
 Doncaster, Boring, 208  
 „ Boulders, 299, 302, 402  
 „ *Cervus elephus*, 378  
 „ Coalfield, 416  
 „ Earthquake, 192, 378  
 „ Glacial Geology of, 351  
 „ Glacials, 183, 378, 389  
 „ Gravels, 379  
 „ History of, 208  
 „ Map, 478, 481, 483, 501, 502  
 „ Marine Beds, 399  
 „ Permian Fossils, 409  
 „ Pleistocene Mammals, 378  
 „ Sanitation, 370  
 „ Water, 132, 158  
 Donnington, 308  
 Dorman Museum, 410  
 Dorsthill, 16  
 DOUGLAS, J., 342  
 DOUGLAS, JAMES ARCHIBALD, 409  
 DOUVILLE, H., 369  
 Dove Cote Gill, 209  
 Dowka Bottom Caves, 438  
 Dowker Gill Cavern, 209  
 Dowkerbottom Cave, 107, 170, 176, 193  
 „ Cave, Contents, 92  
 Downholme, Map, 493  
 Dragon Pit, Map, 490  
 Drainage, Glacial, 324  
 „ of Driffeld, 136  
 „ of Rye and Derwent, 76  
 „ Sections, Bridlington, 184  
 „ Sections, Flamborough, 251  
 DRAKE, F., 13  
 „ H. C., 378, 389, 409, 418, 426,  
 432, 437, 449  
 Draughton, 194, 255, 259  
 „ Carboniferous Limestone,  
 165  
 „ Contortions, 129  
 „ Curved Strata, 220  
 Drax, Boring, 204  
 „ Coal, 227, 228  
 „ Geology of, 181  
 Drebley, Map, 497  
 Drewton, 308  
 „ Dale, 271, 282

- Drewton, Kellaways, 247  
     " Section, 195  
 Driffield, 118, 229, 249, 308  
*Driffield*, 249  
 Driffield and Market Weighton Rail-  
     way, 230  
     " Boulders, 220  
     " Chalk, 445  
     " Drift, 176  
     " Geology of, 195  
     " Map, 479, 481, 497  
     " Museum, 317, 320, 327, 335  
     " Museum, History, 325  
     " Well, 141  
 Drift, Airedale, 415  
     " Ammonites in, 433  
     " and Mammoth, 250  
     " Bielsbeck, 385  
     " Bradford, 325, 336  
     " Coal, 247  
     " Contorted, 76  
     " Cretaceous Fossils, 453  
     " Deposits (Prestwich on), 310  
     " Derived cephalopoda in, 456,  
         464  
     " Distribution of, 142  
     " Driffield, 176  
     " East England, 106  
     " Erratics, 295  
     " Flamborough, 169  
     " Foreign Flints, 404  
     " Fossil Cephalopoda, 433  
     " Great Limber, 385  
     " Greensand Fossils, 298  
     " Hessle, 115  
     " Hills, 157  
     " Holderness, 111  
     " Kirmington, 385, 404  
     " Land-Shells in, 363  
     " Leeds, 310  
     " Lias Fossils in, 431  
     " Littoral, 290  
     " Mytholmroyd, 335, 338  
     " North England, 111  
     " Northern, 70, 197  
     " Reade on, 180  
     " Ripon, 155, 164  
     " Scarborough, 104  
     " Seal Remains in, 463  
     " Theory of, 138  
     " Vale of Mowbray, 234  
     " Vale of York, 62  
     " West Yorkshire, 121, 126  
     " Yorkshire, 130, 466  
 Driftless Area, N.E. Yorkshire, 390  
 Drifts, Cheviot Rocks, 334  
     " Flamborough Head, 243  
     " Humber Gap, 299  
     " Interglacial Problem, 392  
     " Interglacials, 382  
     " Leeds, 379  
     " Drifts, N.W. England, 180,  
         " Settle, 180  
         " Wharfe, 150  
         " Yorkshire, 422  
 Dringhouses, Boulder, 341  
 Drinking Water, Magnesia in, 248  
 Dropping Well, 3, 10, 12, 13, 14, 457  
     " Knaresborough, 282,  
         [292]  
 Dropsy, 125  
 Druidical Remains, 60  
     " " Knaresborough, 57  
 Dry River Bed, Malham, 289  
     " Valleys in Chalk, 212  
 Dublin, 410  
*Dublin*, 15  
 Ducatus Leodiensis, 10, 32  
 Duck bone from Peat, 317  
 Dufton, 228  
 DUGDALE, W., 4, 18  
 Dukinfield Waterworks, 430  
 Dumb Drifts, 87  
*Dumortieria costula*, 239  
 DUNCAN, P. M., 107, 108, 111, 121, 128,  
     163  
 DUNCOMBE, C., 302, 312  
 Duncombe Park, 38  
 Dunford Bridge, 248, 255  
 DUNN, J., 48  
 Dunnington, Map, 498  
 DUNSTON, G., 283, 332, 339, 409, 426  
 DURANT-FARDEL, M., 85, 92, 97, 178  
 Duration of Cleveland Ironstone, 142  
     " Coal, 179  
     " Coalfields, 321  
*Durham*, 44  
 Durham, xxx.  
     " Coalfield Extension, 225  
     " Earthquakes, 191  
     " Magnesian Limestone, 475  
     " Salt, 292  
 DURNFORD, H. ST. JOHN, 273, 283, 303,  
     389, 399, 410  
 Dust and Soils, 186  
 DWERRYHOUSE, A. R., 263, 274, 322,  
     332, 343, 351, 360, 369, 370, 378,  
     389, 410, 426, 436, 437, 441, 444,  
     445, 446, 449, 453, 454, 455, 459,  
     463, 469, 474  
 Dyas, 101  
 Dyke, Ayton, 341  
     " Cleveland, 116, 214, 218, 395,  
         404, 440, 451  
     " Sedbergh, 232  
     " Yorkshire, 283  
 Dykes, Igneous, 214  
     " Mica-trap, 232, 241  
 Dykes, Petrology of, 186  
 DYKES, R., 399, 400  
 Dynamical Theory, Craven Highlands,  
     284  
 DYSON, W. H., 426, 438

- E. — M., 238, 271  
 Earliest Geological Maps, 305  
 'Early British Races,' 264  
 Early History of Spurn, 206  
 " Life on Earth, 207  
 " Man in Britain, 163  
 " Metallurgy, 333  
 " Races, 295  
 Earth, Age of, 340  
 " and Its Story, 426  
 " Evolution of, 464  
 " Folding, 278, 288  
 " Genesis of, 464  
 " History, 439  
 " Making of, 450  
 Earth Movements, Carboniferous, 381  
 " " Post-Carboniferous, 375  
 " " Pre-Permian, 375  
 " Shakes, Barnsley, 369  
 " " in Mining Districts, 369  
 Earthquakes, 12, 16, 292  
 " Doncaster, 192, 378  
 " Hessle, 360  
 " Leeds, 199, 240  
 " Middlesbrough, 191  
 " Thirsk, 398  
 " Tremors, 300  
 " British, 399, 425  
 " Catalogue of, 185  
 " Hereford, 312  
 " Hornsea, 466  
 " Recent, 191  
 " Twin, 369  
 " " Yorks., 369, 373  
 Earthwork Slips, 162  
 Easby, 272  
 " History of, 371  
 " Moor, Map, 485  
 Easington, Boulders, 312, 317, 321, 338, 356  
 " Map, 501  
 Easingwold, 32  
 " History of, 75  
 " Map, 478, 485, 496  
 " Sanitary Conditions, 229  
 " Springs, 75  
 East Ardsley Colliery, 291  
 " " Map, 489, 500  
 " Ayton, Excavations, 361  
 " Cliff, Whitby, 425  
 " Coast of England, 96  
 " Cowton, Map, 493  
 " England, Glacials, 391  
 " Gawber, Map, 488  
 " Harlsey, Boring, 426  
 " " Map, 493  
 " Riding, an Appreciation, 364  
 " " Boulder Committee, 268, 280, 299, 309, 328, 347, 357, 384, 385  
 East Riding Boulders, 210, 276  
 " " Flora, 346  
 " " Geology, 371  
 " " of Yorks., 458  
 " " Story of, 448  
 " Witton, Map, 494  
 " Yorks., 321  
 " " Archæology, 395  
 " " Bibliography, xxxi.  
 " " Boulders, 315, 324, 338  
 " " Burial Mounds, 373  
 " " Description of, 81  
 " " Extinct Animals, 443  
 " " Geological Rambles in, 352, 355  
 " " Geology, 157, 428  
 " " Geology, Questions in, 306  
 " " Glacial Period, 233  
 " " Glacials, 452  
 " " Guide, 459  
 " " History, 443, 463  
 " " Interglacials, 392  
 " " Jurassic Plants, 383, 444  
 " " Making of, 374, 384  
 " " Map, 342  
 " " Mollusca, 364  
 " " Palæontology, 409  
 " " Rivers, 336, 341  
 " " Water Supply, 306, 375, 379  
 Eastburn Farm, 118  
 Eastby, Map, 497  
 EASTERFIELD, T. H., 183, 231, 237, 240, 248, 253  
 Eastern Extension of Coalfields, 400  
*Eastern Morning News*, 145, 200, 227, 228, 302, 317  
 EASTMAN, CHARLES R., 459, 465  
 " C. R., 343  
 EASTMEAD, W., 40  
 Eastington, Map, 500  
 Eaux Minérales, 103  
 " Minérales : Dictionnaire, 92  
 " " (see also under 'Mineral Waters')  
 " Souterraines, 203  
 Ebberston, Map, 495  
 " Moor, Pits on, 298  
 Ebbing and Flowing Well, 30, 32, 33, 396  
 " " Giggleswick, 321, 351, 359, 408  
 'Eboracum,' 13  
 Ecclesfield, Map, 482, 502  
 Eccleshill, 222  
 " Quarries, 435  
 Eccup, 303, 313  
 " (*Dithyrocaris*), 305, 314  
 " Fossil Fish, 318  
 Echinidæ, 89

- Echinoconidæ, 89, 137  
 Echinoidea, 87, 96, 156  
 Echinoids, Yorks., 452  
 Echinodermata, Carboniferous, 105  
     " Cretaceous, 103, 123,  
         127, 137  
     " Bibliography, 96, 311,  
         320  
     " Monograph, 72, 73, 84  
         101, 103, 123, 137,  
         156, 166  
     " Oolitic, 87, 89, 91, 96,  
         101, 110, 156, 166  
     " Palæozoic, 341  
 Echinoderms, 195  
     " Chalk, 309  
 Echinolampidæ, 96  
*Echinus perlatius*, 84  
*Echioceras exortum*, 424  
*Echo*, 209  
 ECKEL, E. C., 450  
 Ecological Methods and Peat, 460  
 Economical Working of Coal, 126  
 Economics and Geology, 345  
 EDDY, S., 65, 67, 89  
 Eden Basin, Vegetation, 363  
     " Valley, Glacials, 139  
 Edenside, Ice Work in, 204  
 'Eddystone Lighthouse,' 22, 30  
 EDGECOMBE, W., 312, 368, 370  
 EDINBURGH, 18, 49, 51, 85, 87, 93, 96,  
     110, 125, 167, 258, 286, 294, 304,  
     335  
*Edin. Journ. Science*, 41  
*Edin. New Phil. Journ.*, 43, 44, 51, 53,  
     65, 84, 85, 89  
     " *Phil. Journ.*, 37, 38, 40, 41  
     " *Phil. Trans.*, 36  
     " *Review*, 34  
 Edlington, 240  
 EDSON, G., 117  
 Education and Geology, 345  
 EDWARDS, MILNE, 107, 128  
 Effects of Moisture on Rocks, 254  
 EGERTON, P. DE M. G., 54, 73, 75, 87,  
     117  
 Egton Grits, 170  
     " Map, 485  
 Elæolite Syenite Boulders, 264  
 Elbolton Cave, 224, 233, 242, 243, 246,  
     250, 257, 266  
 'Elementary Palæontology,' 290  
 'Elements of Geology,' 56  
     " Metallurgy, 136, 207, 244  
     " Mining, 425  
 Elephant, 37  
     " Holderness, 301  
     " Remains, Bridlington, 89  
     " Skull, Kilnsea, 317  
     " Tooth, 45  
     " Tooth, Brough, 395  
 Elephant Tooth, Cayton Bay, 117  
     " Trench, Dewlish, 461  
     " Tusk, 37  
     " Tusk, Bridlington, 93  
 Elephants, Fossil, 147, 157,  
     " Monograph, 167  
*Elephas antiquus*, Bridlington, 384  
     " " Elloughton, 298  
     " " Monograph, 147  
     " " Tooth, 432  
     " Brough, 355  
     " *meridionalis*, 167  
     " *primigenius*, 117, 157, 167, 419  
     " " Boulder Clay,  
         317  
     " " Skipton, 136  
     " (see also Mammoth)  
 Elevation of Carboniferous District,  
     114  
     " Pennine Chain, 243  
 ELGEE, FRANK, 370, 379, 390, 399,  
     410, 421, 426, 450, 459, 469  
 ELIOT, W., 240  
 Eller Beck Bed, 147  
 Ellerton, Map, 499  
 ELLES, GERTRUDE, L., 459, 461, 465,  
     469, 476  
 ELLET, F., 322  
 ELLIOTT, J., 20, 22  
 ELLIS, H. W., T. 111  
     " J. W., 134  
     " R., 183  
 Elloughton, 60, 220, 222, 224  
     " *Elephas*, 298  
     " Gravels, 206, 216  
 Elmet, Kingdom of, 341  
*Elonichthys aikenii*, 338  
     " *binneyi*, 338  
     " *egertoni*, 338  
     " *obliquus*, 396  
 ELSDEN, J. V., 303, 310, 312, 322, 333,  
     343, 351, 390, 399, 400, 410, 411  
 Elvington, Map, 498  
 Embanking Lands, 76  
 Embankment of Holderness, 109  
 EMBLETON, D., 204, 213  
     " T. W., 58, 61, 104, 153,  
     204  
 EMBLETON, THOMAS WILLIAM,  
     (Obituary), 268  
 Embryos of Plesiosaurus, Whitby, 288  
 Emley, Sanitation of, 400  
     " Boring, Map, 488  
 EMMETT, —, 92  
 Emroyd, Map, 489  
 'Enchanting North,' 400  
 'Encroachments of Sea,' 155, 367  
*Encyclopædia Britannica*, 142, 159,  
     209, 340  
*Encyclopædia Metropolitana*, 67  
*Encyclopedie scientifique*, 472

Engine Pit, Map, 489  
*Engineer*, 160, 181, 397  
*Engineering*, 177, 358, 452  
 Engineering and Geology, 302, 312, 313  
     " Metallurgy, 441, 447  
 England and Wales Viewed Geographi-  
     cally, 363  
*Engler's Bot. Jahrb.*, 170  
 'English Lakes,' 88  
     " Spaw Fountaine, ' 2  
     " Topographer, xxxiii.  
 Engraved Geological Maps, 305  
 ENNISKELEN, EARL OF, 117  
 Enteric Fever, Malton, 258  
 Entomostraca, Bradford Shale, 116  
     " Carboniferous, 135, 140  
         184, 187  
     " Monograph, 73, 133,  
         135, 138, 140  
     " Palæozoic, 108, 190,  
         197, 250, 276  
*Entomus burrovii*, Settle, 184  
 Entrenchments, Wetwang, 222  
     " Wolds, 373  
*Epiaster gibbus*, 423  
 Epochs: Ice Age, 279  
*Equisetales* and Allies, 401  
*Equisetities*, Upright, 460  
*Equistum* Beds, Position of, 461  
*Equistum hemingwayi*, 251  
 Equivalence of Pendlesides and Yore-  
     dales, 439  
*Erdm. Journ. Prakt. Chem.*, 81  
 Erosion of Coast, 79, 119, 155, 161, 177,  
     193, 230, 237, 247, 251, 256,  
     261, 273, 281, 286, 288, 327,  
     331, 349, 358, 364, 367, 369,  
     373, 376, 382, 388, 394, 403,  
     407, 415, 423, 430, 438, 449,  
     452, 454, 458, 461, 472, 474  
     " Coast, Aldborough, 441  
     " " Commission on, 387, 435  
     " " Whitby, 425, 473  
     " Deep Sea, 358  
     " Glacial, 139  
     " Humber, 273  
     " Lake Basins, 260  
     " Spurn, 302, 304  
 Erratic Blocks, 55, 260  
     " " Committee, 247, 256,  
         266, 305, 315, 324,  
         334, 344, 402, 409,  
         410, 437, 459, 463,  
         469  
     " " Dispersion of, 80  
 Erratic Blocks, North Sea, 177  
     " " Reports, 138, 143, 162,  
         168, 173, 203, 212,  
         222, 230, 240, 262,  
         276, 286, 353, 362,  
         372, 417, 449

Erratic Blocks, Shap, 105  
     " " Sheffield, 182  
 Erratics, Calder Valley, 63, 143, 158,  
     163  
     " Coast, 306  
     " Distribution of, 227  
     " Drift, 295  
     " Norber, 159, 168, 244  
     " Nunthorpe, 122  
     " Scandinavian, 432  
     " Thirsk, 247  
     " West Yorks., 219  
     " Yorks., 323  
     " Yorks. Coast, 461  
     " (see Boulders)  
*Eryon antiquus*, 431  
     " " in Lias, 418  
 Escarpment of Wolds, 309  
     " in West Yorks., 126  
 Escrick, Map, 498  
 Escrick Boulders, 353  
 Eshton, 6  
 Esk, Yorkshire, 312  
     " Vale, Iron Ore, 77  
     " Valley, Geology of, 96  
 Eskdale, 468  
     " Geology of, 189  
     " Granite at Balby, 311  
 Essex Earthquake, 199  
*Estheria minuta*, 85  
*Estheriæ*, Monograph on, 100  
*Estomatopora dichotomoides*, 393  
 Eston, 232  
     " Iron, 84  
     " Map, 485  
     " Analysis of Iron, 124  
 Estuaries, Bars in, 236  
 Estuarine Shells, Sand-le-Mere, 429  
 Estuarines, Bivalves in, 439  
     " Fern Spores in, 445  
     " Footprints, 469  
     " Gristhorpe, 439  
     " Marske, 355, 455  
     " Whitby, 455  
     " Scarborough, 282  
 ETHERIDGE, E., 91  
     " R., 46, 134, 139, 140, 141,  
         168, 174, 189, 192, 196,  
         206, 213  
     " R., junr., 163  
 Ethnology, Bibliography of, 316  
 Etiology of Goitre, 175  
*Eugnathus*, 54  
*Eunicites reidea*, 285  
 Europe, Map of, 316  
 European Animals, 394  
 European Glacial Deposits, 422, 423,  
     429  
 Euryale, 36  
*Eurycormus*, 270  
 EVANS, —, 263

- EVANS, B., 49, 50  
     " F. J., 131  
     " JOHN, 128, 293  
     " JOHN (Obituary), 418  
     " JOHN W., 469  
     " T. M., 189  
 EVERETT, J. H., 469  
 Everingham, Map, 498  
 Evidences of Scandinavian Ice Sheet,  
     306  
 Evolution, and Palæobotany, 298  
     " Geographical, 446  
     " Geological, 183  
     " of Bridlington, 454  
     " Cleveland Scenery, 352  
     " Don River System, 377  
     " Earth, 464  
     " *Estomatopora dichotomoides*, 393  
     " Kingston-upon-Hull, xxxv.,  
         418, 443  
     " North Sea, 258  
 ' Evolution of Plants,' 346, 442  
 Evolution of Pickering, 371  
     " Seed, 393  
     " Trent, 392  
 Ewcross, Cambrians, 228, 241  
     " Silurians, 241  
     " Silurian Base, 228  
 Examination of Building Stone, 450  
     " Water Supplies, 366  
 Excavations, East and West Ayton, 361  
     " in Drift, 463  
     " in Hull, 454  
 ' Excursions by N.E.R.,' Phillips, 78,  
     80, 82  
     " Record of, 242  
     " to East Yorks., 139  
     " Halifax, etc., 101  
     " to Holderness, 183]  
 ' Exercitationes quinquæ,' 9  
*Exeter*, 199  
 Experiments: Contortions, 118  
     " *re* Gas in Mines, 126  
 Exploration Raygill Fissure, 173  
 Explosions in Coal Mines, 188  
     " Colliery, 86  
 Explosive Slickensides, 204  
 ' Exposition chronologiques,' 71, 72  
 Extension of Coalfields, 51, 277  
     " Coal Measures, 83  
     " Durham Coalfield, 225  
     " Leeds Coalfield, 214  
     " Midland Coalfield, 283  
     " Permians, 102  
 Extension of Yorks. Coal, 149, 284  
     " Yorks. Coalfield, 381  
 Extinct Animals, 93, 372  
     " " Aire Valley, 86  
     " " East Yorks., 443  
     " " Holderness, 299  
 Extinct Animals, Sedbergh, 195  
     " Fauna of E. Yorks., 122  
     " Flora, 298, 462  
     " Mammalia, 197  
     " Mammals (Victoria Cave), 129  
 ' Extinct Monsters,' 250, 257  
 Extra-morainic Boulder Clay, 206  
     " " Lakes, 206  
     " " Lake, Bradford, 330,  
         339  
 FAIRBAIRN, W., 85  
 FAIRBANK & SONS, 231  
 Fairburn Boring, Map, 491  
 FAIRHOLME, G., 51  
 FAIRLEY, T., 134, 168, 174, 303  
     " W., 134, 135  
 Fairy Cave, Swaledale, 87  
 ' Fairy Stones,' 285  
 ' Faked ' Fossil Fish, 432  
 Falcon Clints, Contact Rock, 276  
 Falconer Colliery, Map, 488  
 Fallow Deer, Bones of, 251  
     " " Goole, 254  
     " " Skipsea, 228  
 Fangfoss, Map, 498  
 FAREY, J., 28, 29, 30, 31, 35, 39  
 Faringdon ' Sponge Gravels,' 353  
 Farm Reports, 118  
 Farming in East Yorks., 71  
     " North Yorks., 71  
     " West Yorks, 70  
 Farnham, 41  
 Farnley, 239, 242, 365  
     " Tyas, Sanitation of, 400  
 FARRAH, JOHN, 303  
 FARRAR, R., 360, 370, 390, 400, 426  
 FARRER, J., 107  
     " J. W., 72  
 FARRINGTON, OLIVER CUMMINGS, 438  
 ' Father of English Geology,' 349  
 Faulting, 278, 288  
     " Concurrent, 235  
     " in Boulder Clay, 473  
 Faults and Pot-Holes, 388  
     " " Sea-shores, 264  
     " " Underground Waters, 430  
     " Apperley, 201  
     " Cause of Pot-holes, 377  
     " Craven, 235, 279, 381, 434,  
         436, 455  
     " Cusworth, 378  
     " Fissure, Ingleborough, 369  
     " Flamborough, 169  
     " Malham, 413  
     " Pennines, 455  
     " Settle, 413  
     " Sheffield, 381  
     " Thrusting in, 312  
 Fauna and Flora, Carboniferous, 439  
     " " Distribution of, 68  
     " Bridlington Post-Tertiaries, 173

- Fauna, Carboniferous, 446, 449**  
     " Chalk, 473  
     " Cornbrash, 368, 388  
     " Lower Cretaceous Phosphate  
         Beds, 372  
     " Origin of, 381  
     " Phosphatic Beds, 363  
     " Tees Marshes, 207  
**Faunal Horizons, Coal, 436**  
     " Sequence Carboniferous, 390  
     " Succession, Bernician, 444  
     " Succession, Carboniferous, 403,  
         420, 433  
**FAWCETT, E. A. S., 370, 375**  
**Fawcett Quarries, Striæ, 297**  
**FAWCETT, WILLIAM, 184**  
**FEARNSIDES, WILLIAM GEORGE, 343,**  
     410, 414, 425, 430, 438, 441  
**Featherstone Colliery, Map, 488**  
     " Main, 246  
**FEDDERSEN, ARTHUR, 174**  
**Felidæ, 107**  
*Felis lynx*, 117  
     " *spelæa*, 107, 117  
**Feliskirk, Map, 494**  
**Felkirk, Map, 483**  
**Fell Beck, 458**  
**Fells, Yorkshire, 380**  
**Felspars, Composition of, 305**  
**Felspathic Sandstone, Ingleton, 382**  
**Fenay Bridge, Map, 487**  
**Fence, Map, 487**  
**Fenestellidæ, Carboniferous, 160**  
**FENNELL, C. W., 256, 320, 322, 323**  
**Fentons, Map, 487**  
*'Fer, Metallurgie du,' 97*  
**Fern Sporangium, Spores in, 364**  
**Fern Spores, Jurassic, 445**  
**Ferns, Carboniferous, 243, 374**  
     " " Fructification, 258  
     " " Structure, 258  
     " Fructification, 215  
     " Jurassic, 455  
     " Structure of Carboniferous, 383  
**Ferriby, 60**  
**Ferrous Chloride in Water, 107**  
**Ferruginous Deposits, Cleveland, 94**  
     " Sand, 106  
**Ferrybridge, 44, 55, 273**  
**Ferryhill, Map, 485**  
**Fever, Beverley, 186**  
     " Pocklington, 263  
     " York, 188  
**Fewston, 380**  
**Fewston, Map, 498**  
     " Millstone Grit, 434  
*Field, 186, 188*  
**Field Clubs, Work for, 220**  
**FIELD, J., 223, 248**  
*Field Museum of Natural History*  
*Publications, 438*
- 'Field Note Book,' 442*  
**FIERKE, F. W., 263**  
**Fifty Years' Work, Geol. Ass.n, 434**  
**Figured Specimen, York Museum, 244,**  
     267  
**Filey, 7, 8, 31, 40, 43, 50, 177, 261, 270,**  
     272, 277, 280, 303, 328, 355,  
     386, 473, 476  
**Filey Bay and Brig, 303**  
     " Clay Beds, 82  
     " Glacial Beds, 164  
     " Boulders, 210  
     " Brig and Cliffs, 418  
     " Carr Naze, 273  
     " Concretions, 285  
     " Fossils, 435  
     " Glaciated Surface, 309  
     " History of, 473  
     " Lacustrine Deposit, 230  
     " Lias, 412  
     " Map, 479, 481, 491, 495  
     " Moraine, 321  
     " Peat, 230, 239  
     " Photograph, 303  
     " Rhynchonellæ, 221  
     " Shap Granite, 168, 173  
     " Shell Bed, 169  
     " Water Supply, 385  
**Finland, 295**  
**FINN, C. P., 449, 450, 452**  
**Finningley, Map, 502**  
**Fireclay, Analysis, 91**  
     " Boulder Masses in, 427  
     " Stones in, 357  
**Fire Damp, 86, 114**  
     " Indicator, 115  
     " New Oaks, 151  
**FIRTH, —, 124**  
     " W., 101  
**Fish Bed in Cheadle Coalfield, 385**  
**Fishes, Carboniferous, 178, 196, 386,**  
     396, 397, 420, 445  
     " Baidon, 136  
     " Ganoid, 338  
     " Catalogue of Fossil, 340  
     " Chalk, 403, 405, 446, 454  
     " Coal, 58, 65, 153  
     " Measures, 318  
     " Structure of, 129  
     " Coral Rag, 409  
     " Crossopterygian, 467  
     " Distribution of Carboniferous,  
         357  
**Fishes, Fauna, Coal, 162, 163, 330**  
     " Coal Measures, 339, 346  
     " Halifax, 326  
     " Littleborough, 326  
     " Millstone Grits, 331,  
         339, 346  
     " Pendleside Lime-  
         stone, 348

- Fishes, Fossil, 65  
 " " Catalogue, 117, 227  
 " " General, 54  
 " Ganoid, 396  
 " Halifax Hard Bed, 129  
 " Jurassic, 261, 270  
 " Lias, 75, 300, 310, 454  
 " " Whitby, 290  
 " Limestone Shales, 346  
 " List of Millstone Grit, 366  
 " " Pendleside, 357  
 " Millstone Grits, 318, 357  
 " Pleistocene, 336, 347  
 " Remains, Coal, 87, 143, 148,  
 " 158, 162, 163, 337  
 " " Speeton, 380  
 " " Wensleydale, 183, 380  
 " " Whitby Lias, 124, 290  
 " Spine, 158  
 " Type Specimens, 124  
 " Yoredale, 135, 339  
 FISHER, O., 131  
 " ROBERT, 262, 263  
 Fishlake, Map, 501  
 Fissure, Raygill, 168, 173  
*Fistulipora incrustans*, Bolland, 191  
 FITTON, W. H., 34, 49, 223  
 Fitzwilliam Hemsworth Colliery, 310  
 Flag Rock, Halifax, 137  
 Flagstone Worm Tracks, 75  
 Flagstones, Yorkshire, 89, 310  
 Flamborough, 50, 179, 271, 280, 356,  
 384, 419  
 " Basement Clay, 224  
 " Belemnoid, 360  
 " Blow Holes, 255  
 " Boulders, 233, 243  
 " Buried Valley, 328, 431  
 " Chalk, 72, 288, 445, 473  
 " Cliffs, 244, 394  
 " Denudation, 197  
 " Drainage Sections, 251  
 " Drifts, 169, 243  
 " Fault, 169  
 " Flints, 429  
 " Head, 238, 371  
 " " Boulder Clay, 276  
 " " Boulders, 210,  
 " 216, 241  
 " " Contortions, 196  
 " " Erosion, 150, 155  
 " " Geology of, 296  
 " " Naturalists at, 194  
 " " Photograph, 300  
 " " Map, 479, 481, 496  
 " Headland, Model of, 355  
 " " Lias near, 86  
 " " Map, 496  
 " " Rocks, 195  
 ' Flamborough Village and Headland,'  
 262, 263  
 Flaxby Boulders, 363  
 Flaxton, Map, 486  
 Fleece Inn, Map, 490  
 FLEMING, J., 41, 42  
 FLETCHER, J. S., 313, 322, 333, 354,  
 361, 400, 438  
 " L., 213, 361, 363  
 " W. W. E., 333, 390  
 FLETT, J. S., 379, 382  
 FLIGHT, W., 174, 204  
 Flint, 53  
 " and Chert, 439  
 " *Belemnites lanceolatus*, 431  
 " Black, 403  
 " Distribution, 145  
 " Formation of, 345  
 " Implements, 98, 114, 295  
 " " Adel, 121  
 " " Hessle Clay, 119  
 " " Pennine Chain,  
 216  
 " Rochdale, 175  
 ' Flint Jack,' 99, 110, 111  
 Flint-users, 212  
 Flints, Beneath Peat, 158  
 " Foraminifera, 429  
 " Foreign, in Drift, 404  
 " in Chalk, 154  
 " Pink, in Chalk, 417  
 " Todmorden, etc., 180  
 Flintshire, 380  
 Flinty Chert, 401  
 Flockton Coal, 65, 150  
 Flockton, Map, 489  
 Flood and 'Glacial Nightmare,' 250,  
 257  
 " and Mammoth, 205  
 " Entrance, Gaping Ghyll, 427  
 " Sheffield, 102  
 " Tradition of, 277  
 Floods, River, 231  
 Flora and Fauna, Carb., 425  
 " Antarctic, 462  
 " Carboniferous, 189, 233, 286, 306,  
 325, 334, 335, 344, 446, 449  
 " Carboniferous, Halifax, 219  
 " Carboniferous Rocks, 237, 266  
 " Coal, 334, 394  
 " " Ingleton, 448  
 " " Measures, 324, 428  
 " Fossil, 466, 467  
 " Cretaceous, 464  
 " East Riding, 346  
 " Extinct, 462  
 " Glossopteris, 298  
 " Halifax, 321, 360  
 " " Coal, 157, 174, 190  
 " " Hard Bed, 177, 292  
 " Jurassic, 326, 327, 337, 346, 431,  
 449, 458, 468, 475  
 " " Cleveland, 429



- Flora, Jurassic, East Yorks., 326  
 " " Yorks., 442  
 " Mesozoic, 355, 394, 460  
 " of Banks, 248  
 " of Yorkshire, 58  
 " Oolite, 396  
 " Origin of, 381  
 " Origin of British, 316  
 " Recent, 217  
 " Yorks., Coalfield, 435  
 " West Yorks., 216  
 ' Floras of the Past,' 355  
 Floras, Wealden, 462, 473  
 Florence Court, 117  
*Floriep Notizen*, 37  
 Flots, 173  
 ' Flotz formationen Helgolands,' 256,  
 265  
 Flower of *Williamsonia*, 423  
 Flowering Plants, Mesozoic, 394  
 FLOYER, JOHN, 8, 9, 10, 11, 12  
 Fluor, 28  
 Fluorine in Fossil Bones, 65  
 Folds in Valley Bottom, 360  
*Folkloze*, 454  
 FONS. Scarburgensis, 7  
 FOORD, A. H., 189, 191, 213, 230, 231,  
 240, 262, 263, 274, 293  
 Foot Road Pit, Map, 490  
 FOOTE MINERAL CO., 450  
 Footprints, Oolite, 399  
 " Saltwick, 399, 402, 403,  
 408  
 " Scarborough Oolites, 460  
 " Estuarine, 469  
 " Whitby, xxxv., 399  
 Foraminifera, Boulder Clay, 280  
 " Carboniferous, 143, 187  
 " Carboniferous Lime-  
 stone, 122  
 " Chalk, 92  
 " Crag, 108, 286  
 " Flints, 429  
 " Fossil, 175  
 " Jurassic, 140  
 " Lias, 124  
 " Monograph, 286  
 " Permian, 143  
 " Red Chalk, 212, 229,  
 342  
 " Speeton, 255  
 " Speeton Clay, 474  
 " Skipton, 277  
 FORBES, E., 65, 68, 70, 72, 73  
*Fordingbridge*, 219  
 FORD, L. P., 361  
 " WILLIAM E., 450  
 Foreign Flints in Drift, 404  
 Foreshore Protection, 358  
 Foreshores, Maintenance, 471  
 Forest-Bed, Hull, 111, 200, 248, 268  
 Forest, Buried, Hull, 194  
 " Fossil, at Sheffield, 141  
 " of Bowland, Map, 497, 498  
 " of Knaresborough, 65, 125, 384  
 " of Pickering, 371  
 " Pennine Chain, 175  
*Forester*, 161  
 ' Forests of England,' 177  
 " Submerged, 91, 462  
 Forgeries (Flint Weapons), 98  
 Formation of Boulder Clay, 127  
 " Carboniferous Lime-  
 stone, 182  
 " Carboniferous Rocks  
 259  
 " Caves, 125  
 " Chalk Boulders, 286  
 " Coal, 223, 389, 405  
 " Coal-balls, 396, 397  
 " Coal Nodules, 386  
 " Flint, 345  
 " Infusorial Rocks, 70  
 " Lakes, 402  
 " Magnesian Limestone  
 Cavities, 438  
 " Permians, 128  
 " Red Rocks, 171  
 " Reef Knolls, 338  
 " River Valleys, 283  
 " Trent, 406  
 " Valleys, 115, 263, 402  
 " Valleys, Kirkby Lons-  
 dale, 105  
 FORSTER, W., 28, 36, 178, 180  
 FORSYTH, D., 313  
*Fortnightly Review*, 260  
 Forty Years in Moorland Parish, 238,  
 246, 291, 387  
 Forty Years' Researches (Mortimer),  
 373  
 FOSSICK, W. G., 179  
 Fossil Algæ, Carboniferous, 187  
 " Animal Exuvia in Coal, 68  
 " Asteriadae, 70  
 " Beads, 456, 465  
 " Bones, 46, 47  
 " Botany, 167, 403, 416  
 " " in 1869, 120  
 " " in 1870, 124  
 " " Spencer, 176  
 " " Studies in 324, 326  
 " Brachiopoda, Monograph, 152  
 " Bryozoa, 181  
 " " Catalogue, 284, 313  
 " Cephalopoda, 213, 293, 302  
 " " in Drift, 433  
 " Conchology, 63, 71  
 " Conifera, 51  
 " Corals, 121  
 " Corals, Monograph, 107, 128  
 " Craven, 73

- Fossil Crinoids, 457  
   " Crocodile, 40, 54, 193, 457  
   " Crustacea, 106, 115, 123, 151  
     " Classification, 72  
     " Monograph, 156  
   " Cycads, 120, 405  
   " Elephants, 157, 167  
   " Fauna and Flora, Carboniferous, 439  
   " Fish, 43, 51, 195, 467  
     " Carboniferous, 178  
     " Catalogue of, 54, 117, 124, 227, 340  
     " Chalk, 446  
     " Coal, 58, 59, 153, 168, 240, 247, 326, 330  
     " Crimsworth Dean, 346  
     " ' Faked,' 432  
     " Halifax, 162, 230  
     " Lias, 310, 319, 326  
     " Millstone Grits, 318, 330  
     " Mountain Limestone, 173, 174  
     " Speeton, 87  
     " Spine, 158  
     " Table of, 65  
     " Whitby, 246, 319  
       " Lias, 290  
   " Flora, 48, 466, 467  
     " Barnsley, 184  
     " Cleveland, 456, 464  
     " Coal, 73, 296  
     " Committee, 286, 413  
     " Hutton, 243  
     " Yorks. Coalfield, 435  
   " Footprints, 469  
   " Foraminifera, 175  
   " Forest, Sheffield, 141  
     " Wadsley, 365  
   " Fructification, Coal, 212  
   " Fungi, 162  
   " Fungi, Halifax, 181  
   " ' Horse,' 457  
   " Hyalonema, 109  
   " Ichthyology, 59  
   " Insects, 67  
     " Coal, 110  
     " Lias, 110  
   " Invertebrates, 300  
     " Guide to, 387, 398  
   " Lias, 186  
   " Limpet, Pickering, 302  
   " Mammalia, Catalogue, 191  
   " Mammals, 111  
     " Kirkdale, 64, 69  
   " Mollusca, 177  
     " and Coal Measures, 385  
   " Oysters, Curious, 125  
   " Permian, Knottingley, 116  
   " *Phyllocarida*, 340  
   " Phyllopoda, 206, 215, 286, 314
- Fossil Plant Anatomy, 315  
   " Memoirs, Index to, 261  
   " Plants, 40, 42, 44, 204, 301, 407, 428  
     " and Climate, 472  
     " Address on, 184  
     " Affinities, 307  
     " Antarctic, 473  
     " Ardwick Series, 350  
     " Bunbury Collection, 268, 278  
     " Cayton Bay, 462  
     " Cells of, 219  
     " Coal, 113, 127, 181, 249, 377  
     " Darfield, 165  
     " for Students, 307  
     " Halifax, 143  
     " Halifax Coal, 182  
     " Hooker on, 453  
     " Hutton Coll., 224  
     " Jurassic, 73  
     " Leeds, 101  
     " Marske, 414  
     " Microscopical, 455  
     " North Ofram, 104  
     " Oolitic, 441, 442  
     " Organisation, 208, 227, 236, 254, 279, 290  
     " Scarborough, 126  
     " Scarborough Oolites, 102  
     " Structure, 307  
     " Threshfield, 387  
     " Textbook of, 431  
     " Upleatham, 414  
     " Whitby, 423, 462  
     " Yorks., 442  
   " Polyzoa, 180, 193  
   " Reptiles, 59, 63, 185  
   " Reptilia, 90, 93, 95  
     " etc., 170  
     " Catalogue, 225, 234  
     " Monograph, 100, 105, 109  
   " Shells, Calcium Carbonate in, 437  
     " Colouration in, 393  
     " Coal, 91  
     " Todmorden, 60  
   " Skeleton, 37  
   " Sponges, 205, 214  
     " Catalogue, 179  
   " Sponges, Monograph, 257  
   " Starfish, Lias, 116  
     " Staithes, 68  
   " Starfishes, 65  
   " Stump, Coal, 413  
   " Sturgeon, Whitby, 237  
   " Tree, Ilkley, 201  
   " Trees, Clayton, 197, 202, 203, 206

- Fossil Trees, Coal, 148, 219  
 " Trigonæ, 160, 180  
 " " Monograph, 129, 150  
 " Tusk, Bridlington, 384  
 " Vertebrata, Catalogue, 237  
 " Vegetables, 49, 51  
 " Walrus, 337  
 " Weather, 438  
 " Whitby, 439  
 " Wood, 55  
 " " Coal Nodules, 167  
 " " Lias, 52  
 " Worm, 74, 75  
 " Yorkshire Lias, '90  
 Fossiliferous Beds, Bielsbeck, 432  
 " Drifts, Kirmington, etc.,  
 366, 375, 385, 419,  
 432  
 Fossils, and Condition of Deposits, 389  
 " Bedwell Collection, 291  
 " Bridlington Crag, 89, 103  
 " British, 236  
 " " Isles, 213  
 " Carboniferous, 248, 424  
 " Catalogue of, 64  
 " Chalk, 462  
 " " Bridlington, 116  
 " Characteristic, 398  
 " Clitheroe, 199  
 " Coal, 465  
 " Common, 150  
 " " British, 192  
 " in " Conglomerate, Moughton  
 Fell, 216  
 " Cornbrash, 378  
 " Distribution of, 55  
 " Drift, 453  
 " Filey, 435  
 " Halifax Coal, 169, 309  
 " Lias, in Drift, 431  
 " Lether Collection, 383  
 " Limestone Shales, 60  
 " List of British, 70  
 " Magnesian Limestone, 232  
 " Millstone Grit, 313, 318, 391  
 " Mineralization of, 254  
 " Netherley, 291  
 " Oolitic, 262  
 " Oxford Museum, 328  
 " Palæozoic, 268  
 " Pendleside, 391  
 " Permian, 73  
 " Preservation of, 363  
 " Pule Hill, 331  
 " Settle, 155  
 " Snydale Colliery, 209  
 " Speeton Clay, 288, 378, 402  
 " Study of, 474  
 " Yoredales, 318  
 " Yorks., Index, 426  
 " Whitby, 249  
 FOSTER, C. E. LE NEVE, 117, 118, 263,  
 283, 293, 303, 313, 322,  
 425, 426, 477, 502  
 " H. T., 333  
 " M., 223, 231  
 ' Founders of Geology,' 294, 370  
 Fountain-Fell, Map, 495  
 Fountains Abbey, 26, 33, 54, 56, 58, 60,  
 66, 79, 132  
 Four Lane Ends, Map, 489  
 FOWLER, J. C., 398, 400, 410, 411, 459,  
 460  
 FOX, H., 196  
 FOX-STRANGWAYS, C., xxxi., 134, 158,  
 159, 163, 168, 169, 172, 174, 184,  
 188, 195, 196, 213, 215, 216, 222,  
 223, 238, 241, 242, 243, 248, 263,  
 264, 283, 293, 303, 361, 370, 379,  
 382, 390, 400, 477, 478, 479, 483,  
 484, 485, 486, 491, 493, 494, 495,  
 496, 497, 498, 499, 500  
 FOX-STRANGWAYS, CHARLES EDWARD  
 Obituary, 422, 435, 440  
 Fox Wood, Map, 490  
 Foxholes Colliery, 291  
 " Map, 496  
 Foxup, Map, 495  
 FRAAS, O., 74  
 Fragmental Rocks as Records, 341  
*France*, 103  
*Frankfurt*, 1, 7  
 FRANKLAND, P. F., 248  
 Franz Josef Land, 298  
 FRASER, J. G., 99  
 FREEMANTLE, W. T., xxxiv.  
 FRENCH, J., 3, 16  
 Freshwater Fish in Coal, 158  
 " Mollusca, East Yorks., 364  
 " Remains, Bridlington, 159  
 " Sponges, 329  
 FRETWELL, —, 268  
 Fretwell's Guide to Hornsea, 261  
*Frichiella subcarinata*, 424  
*Friend*, 351  
 Fringe of Cleveland Hills, 404  
 Fructification of Carboniferous Ferns,  
 258  
 " Coal Ferns, 215  
 " *Sphenophyllum*, 251  
 Fruits, Fossil, 116, 117  
 " Oolites, 223  
 Fryston, 427  
 Fulford Gravels, 275  
 FULLER, T., 4  
 Fungi, Cretaceous, 464  
 " Fossil, 162  
 FURNISH, A. H., xxxiv.  
*Fusulina*, 143  
 Fylingdales Moor, Map, 493  
*Gadus morrhua*, 336

- GAGES, A., 92  
 Gainsborough, 406  
 GAIRDNER, M., 49  
 GALE, T., 10  
 GALLEYBY, A., 142, 144  
 Gallium in Cleveland, 284  
 " " Ironstone, 294  
 GALLOWAY, R. L., 174, 283, 293, 303,  
 315, 333, 343, 361  
 " W. B., 196  
 Ganister Coal, 50  
 " Halifax, 228  
 " Meanwood, 427  
 " Plants, Sheffield, 389  
 " Quarry, 246  
 Ganoid Fish, 72  
 " Fishes, Carboniferous, 338, 396,  
 420, 445  
 " Fishes, Structure, 129  
 Ganoidei Heterocerci, 73  
 Gansted, Chalk at, 286  
 " Strata, 289  
 Ganton, Holaster, 215  
 " Map, 495  
 " Wold, 189  
 Gap, Lincoln, 282  
 Gaping Ghyll, 270, 297, 409, 411, 416,  
 426, 427, 431, 442,  
 458, 460, 470  
 " " Hole, 311, 321, 351, 367  
 Gaps in Lias, 348  
 GARDINER, C. I., 469  
 GARDNER, J. S., 184, 196, 204, 223  
 Garford, Map, 484  
 Garforth, 222, 223, 407  
 " Collection, Coal, 452  
 " Colliery, 271  
 " Magnesian Limestone, 379  
 GARFORTH, W. E., 447  
 Gargrave, Map, 497  
 Garnets in Millstone Grit, 52  
 GARNETT, —, 25, 27  
 " T., 22, 23, 24, 25, 28, 38  
 " T. A., 45  
 Garnett's Mill, Map, 490  
 GARROD, A. E., 274, 277, 343  
 Garrow Tree Hill, Map, 487  
 GARSON, J. G., 264  
 GARWOOD, E. J., 274, 277, 283, 287,  
 294, 303, 304, 313, 322, 390, 438,  
 459, 460, 469  
 Gas, Marsh, 466  
 " Natural, Haverton Hill, 237  
 " New Oaks Colliery, 147, 161  
 " Outbursts, 124, 126  
 " Silkstone Coal, 145  
 GASCOIGNE, R., 164, 204, 214  
 Gasteropoda, Carboniferous, 189, 223,  
 302  
 " Catalogue of, 350, 359  
 " Gilbertson Collection, 163  
 Gasterapoda, Inferior Oolite, 265, 275  
 " Jurassic, 205, 214, 224,  
 233, 250, 275, 297  
 " Jurassic, Catalogue of,  
 250  
 " Lias, 295, 350  
 " Lower Oolite, 184  
 " Millstone Grit, 291, 401  
 " Monograph, 285  
 " Oolite, 350, 359  
 " Oxfordian, 184  
 " Rhætics, 350  
 GATTY, ALFRED, 87  
 Gault, 255, 324  
 " Crustacea, 99  
 Gawber, Map, 487  
 " Hall Boring, Map, 488  
 GEIKIE, A., 85, 128, 159, 174, 190, 214,  
 256, 264, 274, 283, 294, 303,  
 304, 352, 370  
 " J., 135, 148, 151, 169, 264,  
 274, 275, 294  
 GEIKIE'S (JAMES), Correlation of  
 Glacials, 130  
 GEINITZ, —, 101  
 " H. B., 95  
 Gem-Stones, 454  
*General Evening Post*, 19  
 General Section of Coal Measures, 275  
 Genesis of Chalk, 266, 415  
 " Earth, 464  
 " Metallic Ores, 405  
*Gentleman's Magazine*, 15, 16, 18, 21,  
 22, 23, 37, 42, 57, 60, 94,  
 111, 300, 366  
 Gentleman's Magazine Library, 204  
 Geographical Distribution, Disease 139  
 " " Plants and  
 " " Insects, 390  
 " " Plesiosaurs, 171  
 " " Vegetation, 356, 363  
 " " Evolution, 446  
*Geog. Journ.*, 273, 292, 355, 363, 364,  
 382, 394, 414, 417, 424  
 Geography, British Isles, 409  
 " Carboniferous, 213  
 " Structural, etc., 400  
*Geol. and Nat. Hist. Rep.*, 105, 106,  
 109, 114, 115, 117, 119  
 Geological Atlas, 105, 167, 465  
 " Collections in British Mus-  
 eum, 363  
 " Diagram of Yorkshire Coal-  
 field, 476  
 " Episodes, 161  
 " Evolution, 183  
 " History, East Yorkshire,  
 264  
 " History of Plants, 213  
 " " Rivers, 336  
 " Literature (1894-1912), 271,

- 281, 292, 311, 320, 331,  
341, 350, 406, 436, 451
- Geological Magazine*, xxxiii., 103,  
104, 105, 107, 109, 110, 111, 112,  
113, 115, 117, 118, 119, 120, 121,  
123, 124, 125, 126, 127, 128, 129,  
130, 131, 132, 138, 139, 140, 141,  
142, 143, 145, 147, 148, 149, 151,  
152, 154, 157, 158, 159, 160, 161,  
162, 163, 164, 165, 166, 169, 170,  
171, 175, 177, 178, 179, 181, 183,  
184, 186, 187, 190, 191, 192, 193,  
195, 196, 197, 198, 200, 202, 204,  
205, 206, 207, 208, 209, 213, 216,  
217, 218, 223, 225, 226, 227, 229,  
231, 232, 233, 234, 239, 240, 243,  
244, 246, 247, 248, 249, 250, 252,  
254, 256, 257, 259, 262, 263, 264,  
265, 267, 268, 269, 270, 271, 273,  
274, 275, 276, 277, 278, 280, 281,  
283, 284, 285, 286, 287, 288, 290,  
292, 293, 294, 295, 296, 300, 301,  
304, 305, 310, 312, 314, 315, 316,  
318, 319, 321, 322, 324, 326, 327,  
328, 330, 331, 332, 333, 334, 335,  
336, 337, 338, 339, 341, 343, 344,  
345, 347, 348, 349, 351, 352, 353,  
355, 358, 359, 360, 361, 362, 363,  
364, 366, 367, 369, 371, 373, 375,  
376, 377, 378, 379, 380, 381, 383,  
384, 386, 388, 389, 390, 391, 392,  
393, 394, 395, 396, 398, 399, 401,  
404, 405, 406, 409, 412, 413, 414,  
415, 420, 421, 423, 425, 426, 430,  
431, 433, 434, 435, 437, 438, 439,  
440, 443, 445, 447, 448, 450, 451,  
453, 457, 458, 459, 460, 461, 462,  
464, 465, 469, 471, 474.
- Geological Map*, 79, 281
- „ Maps, Earliest, 305
- „ Observations on Alpine  
Glaciers, 266, 276
- „ *Observer*, 74
- „ Photographs, 220, 224, 233,  
238, 242, 250, 257, 266,  
276, 290, 300, 302, 309,  
318, 329, 330, 339, 348,  
350, 357, 366, 375, 384,  
419, 421, 432, 444, 445,  
454, 476
- „ Rambles in East Yorkshire,  
352, 355
- „ Rambles in Yorkshire, 177
- „ *Record*, xxxiv., 434
- „ Society of London, xxxi.
- „ Society's Work, 265
- „ Survey, 113, 241, 271
- „ „ Horizontal Section  
184
- Geological Survey Memoirs*, xxxiv.,  
xxxix., 94, 100, 118, 120, 125, 127,  
134, 140, 153, 154, 158, 159, 161,  
163, 164, 169, 172, 174, 184, 189,  
190, 192, 195, 196, 204, 211, 218,  
236, 240, 242, 248, 353, 361, 379,  
400, 433, 452, 460, 475
- Geological Survey Report*, 264, 274, 291
- Geological Survey, Summary of Pro-  
gress*, 301, 304, 341, 343, 345, 350,  
354, 359, 362, 368, 378, 385, 400,  
402, 405, 422, 426
- Geological Time*, 370, 471
- „ Treatise on Cleveland, 94
- Géologie du l'est du Yorkshire*, 213, 241
- Geologist*, 63, 87, 88, 89, 90, 91, 92, 93,  
94, 95, 96, 98, 100, 101, 102
- Geologists and Editors*, 423
- Geologists' Association*, 91
- „ „ Excursions 242
- „ „ Fifty Years'  
Work of, 434
- Geology*, 439
- „ and Agriculture, 64, 256
- „ „ Archæology, 108
- „ „ „ Relations of  
78, 80
- „ „ Economics, 345
- „ „ Education, 345
- „ „ Engineering, 302
- „ „ Mining, 420
- „ „ Population, 212, 256
- „ „ Sanitation, 319
- „ „ Scenery, 330
- „ „ Vegetation, 384
- „ „ Water Supply, 390
- „ Agricultural, 354
- „ Applied, 312
- „ Askrigg, 372
- „ Barnsley, 153, 184
- „ Beginnings of, 457
- „ Birmingham, 306
- „ Bolton-on-Dearne, 144
- „ Bowland Knotts, 309
- „ Bowness, 127, 218
- „ Bradford, 132, 136, 158, 330,  
387
- „ Bridlington, 221, 228, 238,  
474
- „ Bridlington Bay, 189
- „ British Association, 319, 356,  
422, 428, 459
- „ Brough, 337
- „ Building Stones, 428
- „ Burnley Coalfield, 139
- „ Calderdale, 278
- „ Carboniferous, 196
- „ Cave, 179
- „ Clapham, 401
- „ Class Book, 129, 160
- „ Cleveland, 95, 131, 167
- „ „ North, 211
- „ Clitheroe, 338

Geology, Coal, 134  
 " " and Coal Mining, 400  
 " Commercial Aspects, 250  
 " Comparative, 276  
 " Counties, 154, 174, 401  
 " Craven, 128, 134, 154, 156  
 " Darlington, 102  
 " Deepcar, 293  
 " Derbyshire, North, 204  
 " Dewsbury, etc., 125  
 " Drax, 181  
 " Driffield, 195  
 " East Riding, 371  
 " Engineering, 312, 313  
 " England and Wales, 146, 209  
 " Eskdale, 189  
 " Esk Valley, 96  
 " First Book of, 476  
 " for Beginners, 309  
 " Students (Green's), 144  
 " Founders of, 294, 370  
 " Geikie on, 159  
 " Grassington, 148, 247  
 " Green on, 159  
 " Halifax, 137, 289, 356  
 " Handbook to, 184  
 " Harrogate, 101, 105, 134, 170,  
 356, 400, 429, 440  
 " Hebden Bridge, 391  
 " History of, 446  
 " Holderness, 192  
 " Hornsea, 268  
 " Hotham, 88  
 " Hull and Barnsley Railway,  
 195  
 " Humber District, 431  
 " Ilkley, 201  
 " in the Field, 270  
*Geology in the Field*, 411, 428, 430  
 Geology, Ingleborough, 230, 380  
 " Ingleton, 197  
 " Introduction to, 469  
 " Keighley, 128, 148  
 " Kendal, 127, 211, 218  
 " Kirby Lonsdale, 127  
 " Knaresborough, 473  
 " Lake District, 78  
 " Lecture on, 157  
 " Leeds, 190, 356  
 " Leeds, North of, 120  
 " Malham, 292  
 " Mallerstang, 240  
 " Malton, 169, 184, 190  
 " Market Weighton, 200  
 " Meanwood Valley, 305  
 " Middlesbrough, 171, 172  
 " Newcastle, 225  
 " Nidd Valley, 190  
 " Nidderdale, 263  
 " North Clevealand, 211  
 " North Midland Railway, 61

Geology, North Riding, 371  
 " Northallerton, 196  
 " Northumberland, 154, 198  
 " Notts., Yorks., etc., 94  
 " Oldham, 100  
 " Pendle Hill, 338  
 " Pickering Vale, 325  
 " Pontefract, 144, 159  
 " Prestwich on, 199, 217  
 " Redcar, 238, 380  
 " Retrospect, 367  
 " Ripon, 115  
 " Robin Hood's Bay, 380, 392  
 " Rosedale, 189  
 " Rotherham, 159  
 " Runswick, 472  
 " Rutland, 140  
 " Saltburn, 228  
 " Scarborough, 174, 179, 221,  
 228, 264  
 " Scarborough, South of, 163,  
 361  
 " Sedbergh, 127, 218  
 " Settle, 146, 292, 429, 440  
 " Shaw Sike, 347  
 " Sheffield, 159, 428, 439  
 " Shibden, 306  
 " Skipton, 148, 158, 201, 356  
 " Snaith, 181  
 " Stratigraphical, 306, 451  
 " Swaledale, 231  
 " Tebay, 127, 218  
 " Tees Valley, 297  
 " Text Book, 174, 472  
 " Thorncliffe, 333  
 " Thornton, etc., 421  
 " Upper Teesdale, 310  
 " Wakefield, 159  
 " Water Supply, 435  
 " Wensleydale, 247  
 " West Riding, 149, 323, 361  
 " Whitby, 59, 174, 221, 475  
 " York, 168  
 " York and Hull, 196  
 " Yorkshire, xxxix., 53, 141,  
 161  
 " " (Bird), 167  
 " " Coalfield, 235  
 " " Coast, 45, 52, 141  
 " " East, 195, 428  
 " " (Kendall), 392, 394  
 " " North, 97, 376  
 " " North, Coalfield,  
 141  
 " " North-East, 133,  
 390  
 " " South, 236  
 " " South-East, 223,  
 231, 372  
 " " West, 153, 163  
 GEORGE, E. J., 41

GEORGE, E. S., 42, 55  
 " I. E., 184  
 " T. J., 190, 193  
 GERARD, J., 264  
*Germany*, 103  
 Germinating Spores in Fossil Fern-  
 Sporangium, 364  
 GERRARD, J., 343, 390  
*Gervillia acuta*, 441  
 " Jurassic, 441  
 " *scarburgensis*, 141  
 Gibraltar Colliery, Map, 490  
 GIBSON, E., 1  
 " J., 38, 60, 61  
 " W., 343, 379, 400, 422, 426,  
 438, 460, 477  
 Giggleswick, 30, 203, 222, 226  
 " Boulders, 357  
 " Canoe, 98  
 " Cave, 135, 145  
 " Scar, 436  
 " Tarn, 98  
 " Well, 321, 351, 359, 396,  
 408  
 GILBERT, —, 55, 56  
 GILBERTSON, W., 55  
 Gilbertson Collection, 159, 163  
 GILCHRIST, R., 370  
 Gildersome, Map, 483, 489  
 " Sanitation, 333  
 GILL, T., 75  
 " W. H., 190, 210, 214  
 Gillingmoor, Map, 494  
 GILLIGAN, A., 411, 426, 438, 439, 449,  
 450, 460, 469  
 Gilling, Map, 495  
*Ginkgo biloba*, 327  
 Ginkgoalian Leaf, 475  
 " Cayton Bay, 464  
 Gipsy Springs, 193  
 Gisburn, 262, 272  
 " Forest, Map, 497  
 " Map, 478, 497  
 GISSING, F. T., 387, 390  
 Givendale, Red Chalk, 133  
 GJERS, J., 139  
 Glacial Action, 244  
 " Ingleton, 211  
 " Age, 279  
 " and Post-Glacial Deposits, 429  
 " Beds, Bradford, 146  
 " Bridlington, 162  
 " Classification, 274  
 " Correlation, 130  
 " Filey Bay, 164  
 " Sequence of, 123  
 " York, 142, 143  
 " Bibliography, 263, 271, 274  
 275, 280  
 " Committee, 406, 419, 428, 444,  
 455, 463, 474

Glacial Contortions, 300  
 " Deposits, 199  
 " Shelly, 296  
 " Drainage, 324  
 " Drift, Midlands, 300  
 " Ripon, 155  
 " Epoch, 244  
 " Teesdale, 343  
 " Erosion, 139  
 " Features, 407  
 " East Yorkshire, 414  
 " Geology, 259, 447  
 " Bradford, 335  
 " Doncaster, 351  
 " Great Britain, 267  
 " (Lewis, H. C.), 227  
 " Present Aspects, 288  
 " Spitzbergen, 303  
 " Western Europe, 436  
 " Yorkshire, 329  
 " Gravels, Holderness, 395  
 " Hills, 157  
 " History, Holderness, 432  
 " Moorlands, 311  
 " Lakes, 324  
 " Airedale, 379  
 " Basins, 145  
 " Bradford, 330, 339, 367  
 " Mammals, 443  
 " Mound, Lindhead Barn, 365  
 " Nightmare and Flood, 250, 257  
 " Origin of Terraces, 148  
 " Period, 151, 180, 218, 252, 335,  
 450, 471, (*see also*  
 Ice Age)  
 " Case of, 258  
 " East Yorkshire, 233  
 " Man, 254, 261, 266  
 " Plants, 252, 442, 453  
 " Snowfall of, 267  
 " Phenomena, 238  
 " Eden Valley, 139  
 " Problems, 357  
 " Sections, Bridlington, 184, 233  
 " York, 167  
 " Shell-beds, 198  
 " Striae, Barton, 297  
 " Structure of East Yorkshire,  
 115  
 " Submergence, 251  
 " Succession, 256  
 " Survivals, 390  
 " Theories, 273  
 Glacialists' Association, 271  
 " at York, 270  
*Glacialists' Magazine*, 254, 263, 264,  
 266, 267, 270, 272, 274, 276, 278,  
 279, 280, 284, 285, 286, 287, 289,  
 291, 294, 296, 297, 305  
 Glacialpflanzen, 170  
 Glacials, Bolton, 246

- Glacials, Bradford, 325  
 „ Bridlington, 168, 179  
 „ Calderdale, 259  
 „ Coast, 274, 284  
 „ Copley, 362  
 „ Doncaster, 378, 389  
 „ „ near, 183  
 „ East England, 391  
 „ „ Yorkshire, 452  
 „ Europe, 423  
 „ „ European, 422, 429  
 „ „ Grassington, 351, 360  
 „ Guisborough, 379  
 „ Harrogate, 423, 436  
 „ Heck, 263  
 „ Holderness, 463  
 „ Horsforth Valley, 295  
 „ Kettleless, 426  
 „ Lancashire, 465, 471  
 „ Leeds, 246, 247  
 „ Loftus, 426  
 „ Mastodon Tooth, 260  
 „ Norfolk and Suffolk, 427  
 „ Pickering, 383  
 „ Piethorn Valley, 260  
 „ Ribblesdale, 248  
 „ Robin Hood's Bay, 287  
 „ Rombald's Moor, 255  
 „ Settle, 361  
 „ Sheffield, 372  
 „ Teesdale, 249  
 „ Tickhill, 378, 389  
 „ Vale of York, 379  
 „ Wharfedale, 263, 351, 360  
 „ Wolds, 329, 338  
 „ York, 173, 283, 289  
 „ Yorkshire, 293, 426  
 „ „ Uplands, 128  
 Glaciated Rock Surfaces, 233, 243  
 „ „ Filey, 309  
 Glaciation of Bradford, 324, 334, 372  
 „ British Isles, 258  
 „ Calder Valley, 349  
 „ Cleveland, 410  
 „ Dales, 159  
 „ Dearne Valley, 359, 377  
 „ Don Valley, 359, 377  
 „ Keighley, 324, 334, 372  
 „ Norway, 295  
 „ Skipton, 199  
 „ Teesdale, 343  
 „ Tyne Valley, 343  
 „ Vale of York, 206  
 „ Weardale, 343  
 „ Whitby, 199  
 „ York Vale, 180  
 „ Yorkshire, 266, 267  
 Glacier, Baltic, 294  
 „ Dammed Lakes, 334  
 „ Lakes, Cleveland, 344, 353,  
 362, 381  
 Glacier, Lakes, Yorkshire, 349  
 „ Moraines, 216  
 „ Work, Airedale, 210  
 Glaciers, Airedale, 382  
 „ Alpine, 266, 276  
 „ Ancient British, 251  
 „ „ Midlands, 304  
 „ „ N.W. Yorkshire, 129  
 Glaciology, Norfolk, Bibliography, 294  
 Glaisdale, Map, 493  
 Glasgow, 82  
 Glasgow Med. Journ., 112  
 Glasgow Museum, 429  
 Glass Houghton, 476  
 „ „ Colliery, 310  
 „ „ Map, 483, 488  
 Glodwick, Map, 482  
*Glossoptera tricusps non-serrata*, 6  
 Glossopteris Flora, 298  
 Gloucestershire and Yorkshire Oolites,  
 431  
 „ „ Jurassics, 441  
 GLOVER, R. M., 85  
 Gneissoid Granite in Coal, 226  
 Goathland, 355  
 „ Boulders, 324  
 „ Eller Beck Bed, 147  
 „ Moor, Pits on, 298  
 GODWIN-AUSTEN, R. A. C., 117  
 Goitre, 175  
 Gold and Iron, 77  
 „ Distribution, 80  
 Goldsborough, Map, 497  
 Gomersall, Map, 476, 489  
 GOMERSALL, W., 135  
 GOMME, GEORGE LAURENCE, xxxii.,  
 197, 204  
*Goniatites evolutus*, 282  
 Goniatites, Halifax, 201  
*Good Words*, 234  
 GOODCHILD, J. G., 139, 204, 223, 231,  
 241, 242, 248, 253,  
 256, 294, 303, 304,  
 370, 479, 480, 492,  
 494  
 „ W., 399, 400  
 Goodmanham Dale, 385  
 „ Map, 498  
 GOODWILL, THOMAS, 39  
 Goole, 35, 245  
 „ and Marshland Light Railway,  
 343  
 „ Borings, 172, 248, 263  
 „ Coal, 172  
 „ Fallow Deer, 254  
 „ Map, 500  
 „ Moor, 301  
 „ „ Fallow Deer, 251  
 „ „ Map, 501  
 „ Peat, 308  
 „ Red Deer, 308



- Goole Sci. and Field Nat. Soc.*, 401  
 Goole, Water, 196, 263  
     " Water Supply, 315  
     " Wells, 144  
 Gordale, 126, 239  
     " Scar, 158, 242, 344, 402  
 GORDON, Mrs. E. O., 264  
 Goring Gap, 379, 391  
 Gormire, 14  
     " Lake, 201, 202  
 Gorple, Coal at, 110  
 GOTT, C., 135  
 GOUGH, J., 30  
     " R., xxxiii, 1  
 GOWAN, J., 322, 327  
 GOWLAND, WILLIAM, 333  
 Goyden Pot, 209  
 GRACE, G., 369, 370, 378, 379, 389  
 Graham Island, 460  
 GRAINGE, W., 90, 95, 97, 99, 101, 102,  
     103, 104, 125, 139, 174,  
     239, 241  
 GRAINGE, W. D'OYLY, 313  
*Grammoceras orbigny*, 229  
     " *striatulum*, 229  
 Grange School, Bradford, 429  
 Granite, 38, 44  
     " Boulders, 60  
     " from Angermanland, at Eas-  
         ington, 312  
     " Ingleton, 235, 245, 358, 376  
 Granitoid gneiss in Coal, 226  
 Gransmoor, 308  
 GRANTHAM, R. F., 179, 214, 231  
 GRANVILLE, A. B., 61  
 Graptolites, Carboniferous, 392  
     " Cautley, 445  
     " Marr on, 287  
     " Monograph, 459, 469  
     " Salopian, 445  
     " Sedbergh, 445  
 Graptolitic Zones, Cautley, 434  
 Grassington, 239, 242, 249, 253, 387,  
     401, 427  
     " *Argillæcia*, 197  
     " Carboniferous, 434  
     " Map, 487  
     " Cave, 235  
     " Geology of, 148, 247  
     " Glacials, 351, 360  
     " Knolls, 312  
     " Lead Mines, 67, 100, 193  
     " Map, 222, 478, 486, 496  
     " Mineral Veins, 437  
     " Mines, 65  
     " Moor, Millstone Grits,  
         351  
     " Myriapods, 208  
 Gravel Beds, 78  
     " in Boulder Clay, 239  
     " in Lonsdale, 370  
 Gravel Ridges, Vale of York, 352  
 Gravels, Armthorpe, 379  
     " Around Hull, Origin, 307  
     " Barnsley, 201  
     " Bishopthorpe, 167  
     " Bridlington, 157  
     " Brough, 298  
     " Burstwick, 338  
     " Codfish Remains, 418  
     " Colne, 147  
     " Doncaster, 379  
     " Elloughton, 206, 216, 298  
     " Fossil Beads in, 465  
     " Fulford, 275  
     " Heck, 263  
     " Hessle, 250, 279, 290, 309  
     " Holderness, 356, 387, 395,  
         403, 404  
     " Hull, (Around), 317  
     " Interglacial, 278  
     " Kelsey Hill, 387  
     " Middle, 285  
     " Nunthorpe, 122  
     " Origin of Wold, 185  
     " Quarternary, 120  
     " Rea Valley, 296  
     " River, 264  
     " Shipton, 99  
     " Vale of York, 62, 128  
     " Valley, 119  
     " Walrus in, 337  
     " York, 167  
 GRAVES, J., 27  
 GRAY, JOHNNIE, 231, 235, 241, 245,  
     248, 253  
     " J. W., 256, 258, 450, 471  
 Great Ayton, 459, 468  
     " Dyke, 258  
     " Whinstone, 340  
 Great Flood at Sheffield, 102  
     " Hambleton, Lead, 140  
     " Ice Age, 135, 148, 151, 231, 264,  
         275  
     " Ings, Map, 487  
     " Limber, Drift, 385  
     " Mitton, Map, 499  
     " Mollusca, 413  
     " Oolite Mollusca, 77  
     " Ouseburn, Diphtheria, 192  
     " Stainforth, Map, 495  
     " Submergence, 238, 266, 267, 292  
     " Thirkelby, Map, 495  
     " Whernside, Millstone Grit, 467,  
         470  
 GREAVES, J., 68  
 Greaves, Map, 487  
 GREEN, A. H., 113, 117, 118, 120, 121,  
     123, 124, 125, 126, 128,  
     131, 139, 144, 148, 149,  
     152, 153, 154, 155, 159,  
     160, 174, 197, 204, 208,

- 477, 478, 482, 483, 484,  
485, 487, 488, 500, 501,  
502
- GREEN, ALEXANDER HENRY, Obituary  
280, 294, 297, 306
- Green Farm, Map, 490
- GREEN, J. A., 233, 352
- Green Lane Pit, Map, 489
- „ Slates, Ingleton, 119
- GREENBY, EDWARD, 333
- Greenhow, Caves, 134
- „ Hill Cave, 96
- „ Hill, Map, 485
- GREENOUGH, —, 35
- „ G. B., 106, 107, 108,  
109
- Greensand, Crustacea, 99
- „ Fossils in Drift, 298
- „ Upper, 324
- „ Water Supply, 316
- GREENWELL, A., 310, 312, 322, 333, 370,  
379, 390, 396, 399,  
400, 410, 411
- „ G. C., 179
- „ WILLIAM, 149, 150
- GREENWOOD, J. H., 427, 434
- „ J. H. Y., 391
- „ W. H., 426
- GREGORY, E. E., 322, 361, 379, 391,  
400, 411, 415, 469, 474
- „ J. W., 248, 254, 264, 274,  
284, 303, 304, 313, 400,  
450, 469
- GREGSON, W., 210, 214, 220, 223, 256,  
264, 274, 304, 313, 343, 352
- GRINSTED, F. F., 284
- GRISLEY, W. S., 197, 204, 214, 256, 274,  
284
- Greta, 253
- Greta Bridge, 41, 42
- GRETTAN, E., 55
- GREW, E. S., 411
- Griffithides barkei*, 398, 421
- „ *shunnerensis*, 471
- Grimesthorpe, 282
- Grimethorpe Colliery, 310
- Grindleton, Map, 498
- Grinton, Map, 493
- Gristhorpe (Grysthorpe), 42, 44
- „ 280, 432
- „ Bay, 190
- „ „ Beania, 117
- „ Estuarines, 439
- „ Map, 485, 495
- „ Plant Bed, 106
- Grit Rocks, Halifax, 317
- Grits, Constitution, 170
- GROOM, T. H., 264
- Grosmont, Map, 479, 481, 493
- „ Shap Granite, 301
- Growth of Spurn, 359
- GRUNDY, J. H., 313
- GRUNER, E. L., 97, 99, 100
- GUEST, J., 159
- Guide, Boroughbridge, 68, 259
- „ Brimham Rocks, 104
- „ Coast, 287
- „ „ Yorkshire and Lincoln-  
shire, 96
- „ Craven, 73
- „ East Yorkshire, 459
- „ Fossil Invertebrates, 300, 387,  
398
- „ Geology of Coast, 90
- „ „ Whitby, 476
- „ Harrogate, 66, 95, 132, 139,  
238, 311, 399
- „ Health Resorts, 183
- „ Hornsea, 261, 263, 268
- „ Hull Museum, 91, 463
- „ Invertebrates, 436
- „ Lakes, 64
- „ Leeds Museum, 449
- „ Malham, 69, 403
- „ Manchester Museum, 314
- „ Mineral Collection, Leeds, 185
- „ Minerals, 429
- „ Newcastle, 225
- „ Ripon, 66, 79, 83, 87
- „ Scarborough, 61, 93, 376
- „ „ Museum, 371
- „ Sheffield, 159
- „ Stone Age Antiquities, 345
- „ Wensleydale, 380
- „ West Riding, 262
- „ Yorkshire, 87, 96, 110
- „ „ East, 459
- Guisborough, 39
- Guisborough, 39, 377, 388, 421
- „ Boulders, 210, 214, 241
- „ Glacials, 379
- „ Map, 480, 492
- „ Spa, 69
- „ „ Water, 168
- Guseley, 188
- „ Railway Cutting, 253
- GUNN, —, 305
- „ W., 139, 149, 152, 154, 159,  
230, 231, 304, 313, 478, 479,  
480, 491, 492, 493, 494, 495,  
497, 498, 499
- GUNNILL, J., 400
- GUY, ERNEST, 438
- GWINNELL, RUSSELL, F., 438
- Gypsey Springs, 272, 282
- Gypsum, 25, 28, 29
- „ Origin of, 395
- „ Ripon, 282
- Gyracanthus denticulatus*, 163
- Gyrodus*, Coral Rag, 389
- „ *punctatus*, 261
- Gyrosteus mirabilis*, 237

- H——, L. F. V., 214  
 Ha, Cave, 135, 145  
 HABERSHON, M. H., 426  
 Habitation Terraces, 207  
 Hackfall, 26, 31, 33, 54, 58, 66, 79,  
     132, 259, 282  
 Hackfield, 60  
 Hackness, 50, 261, 308  
     " Brachiopoda, 260  
     " Map, 485, 494  
 'Haddockstones,' 222, 226, 236  
 HADLEY, GEORGE, 21  
 Haiburn Wyke, see Hayburn Wyke.  
 Haigh Moor, Map, 489  
     " Coal, Map, 488  
 HAIME, J., 74, 75  
     " JULES, 107, 108, 128  
*Halifax*, 3, 13, 16, 22, 24, 51, 57, 101,  
     112, 360, 383, 418  
*Halifax*, Antiquities, 187  
     " *Astronomy*, 181  
     " Beds, Cells of Plants, 219  
     " Better Bed, 230  
     " Bibliography, xxxiv., 437, 449  
     " Borings, 102, 317, 356, 366  
     " Books and Authors, xxxiv.  
     " Boulders, 60, 212, 260  
     " *Calacanthus*, 230  
     " *Calamites*, 275  
     " Coal, 323  
     " " Balls, 143, 354, 296, 397  
     " " Concretions, 208, 348  
     " " Flora, 157, 174, 190, 219  
     " " Fossils, 169  
     " " Mining, 193  
     " " Nautilus, 65, 71  
     " " Plants, 156, 166, 169,  
         172, 227, 236, 254, 279,  
         295, 354  
     " " Strata, 309  
     " " Structure, 124  
     " Collieries, 61  
     " *Elionichthys*, 396  
     " Fish Fauna, 129, 318, 326  
     " Flints near, 163  
     " Flora of, 321, 360  
     " Fossil Fish, 162  
     " " Fungi, 162  
     " " Plants, 143, 182, 208  
     " " Tree, 203  
     " Fossils, 309  
     " Gannister, 228  
     " *Geological Surv. Mem.*, 125  
     " Geology of, 137, 201, 289, 356  
     " Hard Bed, 146, 150, 173, 177,  
         203, 354, 375, 383, 386,  
         396, 397, 405, 420, 445  
     " Hard Bed, Boulder in, 226  
     " " Flora, 292  
     " " Fossil Fungi, 181  
     " " Plants, 389  
*Halifax*, Hard Coal, 331  
     " " *Traquaria*, 162  
     " *Koloxylon*, 275  
     " Land Movements, 331  
     " *Lepidodendron selaginoides*,  
         375  
     " *Lepidophlois*, 258  
     " *Lepidostrobus*, 383  
     " *Lyginodendron*, 275  
     " Macrospores, 195  
     " *Magalichthys*, 191  
     " Map, 340, 478, 484, 487, 489,  
         500  
     " Millstone Grit, 122, 137, 356  
     " Mineral Springs, 60  
     " Moors, Flints, 158  
*Halifax Naturalist*, 289, 306, 309, 311,  
     317, 318, 321, 322, 328, 331, 338,  
     347, 349, 356, 362  
*Halifax*, Nodular Concretions, 354  
     " Place Names, 342  
     " Plant Remains, 348  
     " Prehistoric, 383  
     " Prehistoric Implements, 451  
     " *Rachiopteris*, 284  
     " Rainfall, 340  
     " Rough Rock, 137  
     " Sandstone, 382  
     " Section at, 208, 328  
     " *Sigillaria*, 320  
     " *Stigmara*, 386  
     " Stone, 227  
     " Strata, 112, 289  
     " Vegetation, 356  
     " Waters, 61  
 HALL, ELIAS, 50, 53  
     " F., 391  
     " H. F., 111  
     " J. E., 341, 343  
     " T. Y., 76  
 Hallam Moors, Map, 502  
 Hallamshire, Map, 482  
 Hallas Field Boring, Map, 488  
 HALLE, T. G., 460, 462  
*Halonis gracilis*, 127  
 Halton Gill, Map, 495  
*Halycites catenularia*, 451  
 Hambledon Hills, Map, 482, 485, 494  
 Hambleton " 44, 388  
     " Quarry, Kaolinite, 399  
 Hammer of Whinstone, 212  
 Hampole, 405, 409  
 Hampsthwaite, 407  
     " Map, 497  
 HANCOCK, A., 87, 90  
 'Handbook for Harrogate,' 77, 87, 88,  
     128  
     " for Yorks,' 366  
 Handbook of Geol. History, 198  
     " Topography, xxxiii.  
     " to Leeds, 234, 236

- Handbook to Minerals, 374  
 " to Sheffield, 426, 428  
 " to Spas, 138  
 " to York Museum, 169  
 HANDBY, J. W., 314  
 Handsworth, Map, 502  
 Harbour at Redcar, 69  
 " Scarborough, 69  
 " Whitby, 69  
 " Projections, 461  
 Harbours, Construction of, 56  
 " on Sandy Coasts, 290  
 " Plan of, 68  
 Hard Bed, Halifax, 150, 203, 354  
 " Coal, Idle, 185  
 HARDCASTLE, C. D., 194, 197, 202, 205,  
 210, 214, 223, 241, 242, 248, 253,  
 256, 294  
 Hardcastle Crag, 253  
 Harden Moor, Striated Surface, 391  
 " Moss, 466  
 HARDWICK, C., 108  
 " F. W., 426  
 Hardwicke's Science Gossip, 132  
 HARDWICKE, H. J., 179  
 Harewood, 33, 56, 58, 60, 132  
 " Map, 498  
 " Park, Boulders, 443  
 HARFIELD, E., 323  
 HARGREAVES, J. A., 411, 426, 432, 460,  
 469  
 HARGROVE, E., 17, 19, 20, 22, 24, 28,  
 36, 50  
 " W., 34  
 HARKER, A., xxx., xxxi., 190, 194, 197,  
 210, 214, 221, 223, 228,  
 232, 233, 241, 248, 249,  
 256, 257, 264, 265, 275,  
 284, 294, 304, 314, 343,  
 352, 354, 401, 411, 438,  
 447, 450  
 " T., 401  
 HARKNESS, —, 99  
 " R., 102  
 Harley Green, 22  
 Harlow Car Waters, 102  
 HARMER, F. W., 128, 130, 135, 137, 371,  
 379, 391, 411, 426, 469  
*Harmsworth's Magazine*, 306  
 HARPER BROS., 435  
 Harpham, Roman Villa, 365, 374, 385  
*Harporceras mulgravium*, 423  
 HARRISON, S., 102, 103  
 " W. JEROME, 149, 154, 174,  
 274, 275, 284, 294, 304,  
 306, 352, 361, 371, 401  
 " W. JEROME, Obituary, 403  
 Harrogate, Harrigate, Harrowgate, 2,  
 3, 4, 7, 8, 13, 14, 15, 16, 17, 18, 19,  
 20, 21, 22, 23, 25, 26, 28, 29, 31, 33,  
 35, 36, 37, 38, 39, 42, 43, 44, 45, 46,  
 47, 48, 49, 50, 51, 56, 60, 62, 66, 67,  
 79, 81, 92, 123, 126, 128, 132, 133,  
 138, 139, 183, 209, 211, 218, 220,  
 259, 302, 336, 411, 451  
*Harrogate* 54, 59, 66, 87, 88, 94, 95, 97,  
 109, 112, 115, 116, 121,  
 122, 176, 179, 183, 211,  
 223, 239, 277, 313  
 " *Advertiser*, 211, 326  
 " Alum Well, 168  
 " Anticlines, 263  
 " Baths, 274  
 " Boulders, 297, 299  
 " Chalybeate, 108  
 " Chert, 205  
 " First Spaw at, 97  
 " Geology of, 101, 105, 134,  
 170, 356, 400, 429, 440  
 " Glacials, 423, 436  
 " Guide, 66, 95, 132, 139, 311,  
 399  
 " Handbook, ' 87, 88, 147  
 " Health Resort, 194, 226  
 " History of, 125, 159, 174  
 " *Illustrated*, 311, 316, 373  
 " Magnetic Survey, 234  
 " Map, 478, 484, 497  
 " Medical Guide, 63, 70  
 " Mineral Wealth, 189  
 " Pictorial, 228  
 " *Pleuronantilus*, 326  
 " Spas, 61, 78, 80, 82, 84, 97,  
 105, 179, 223, 237, 290,  
 309, 312  
 " Springs, 63, 83, 188, 217,  
 292, 313, 368  
 " " Analyses, 183  
 " Vegetation, 356  
 " Visitor's Guide, 60  
 " " Handbook, ' 56, 58  
 " Waters, 58, 62, 63, 64, 67,  
 71, 77, 79, 80, 81, 85,  
 87, 88, 94, 102, 103,  
 105, 107, 108, 109, 112,  
 114, 115, 116, 118, 119,  
 121, 122, 125, 126, 127,  
 128, 131, 133, 134, 136,  
 138, 170, 173, 180, 182,  
 188, 229, 251, 253, 258,  
 259, 268, 277, 290, 309,  
 310, 312, 317, 335, 336,  
 367, 397  
 " Waters, Analyses, 92, 110,  
 119, 121, 122, 131, 133,  
 134, 147, 193, 271, 316,  
 317, 318  
 " Water Supply, 303  
 " Wells, 54, 72, 146, 189  
 Harswell, *Elephas*, 167

- Harthill, Map, 477, 502  
 Hartlepool, Peat, 152  
 " Permians, 173  
 HARTLEY, T., 21  
 " W. N., 284, 288, 294, 295,  
 298  
 Hartley Bank Colliery, 357  
 " Map, 488  
 HARTOP, H., 61  
 HARTSHORNE, J., 379, 380  
 Hartwith, 104  
 Harwood Dale 365  
 " Map, 493  
 HASTINGS, CUTHBERT, 438  
 " C. W., 169  
*Hastings and East Sussex Naturalist*,  
 473  
 HATCH, F. H., 232, 241, 411, 450, 460,  
 462  
 Hatfield Chase, 4, 9, 42, 91, 202, 210,  
 262, 350  
 " Map, 502  
*Haugia beanii*, 424  
 Havercroft, Map, 484  
 HAVILAND, A., 125, 139, 179  
 Haw Bank Tunnel, 273  
 HAWELL, J., 232, 242, 293, 295, 304,  
 323, 352, 355, 371, 391,  
 459, 460  
 " JOHN, Obituary, 369  
 Hawes, 44, 185, 188  
 " Map, 479, 494  
 " Underground Waters, 430  
 " Yoredales, 193  
 HAWKESWORTH, E., 241, 257, 275, 295,  
 323, 333, 335, 343, 352, 361, 379,  
 380, 401, 411, 412, 416, 419, 426,  
 427, 433, 438, 450, 470  
 Hawkesworth Quarry, 410  
 HAWKINS, T., 51  
 Hawks Clough, 296  
 HAWKSHAW, J., 68  
 " J. C., 125, 139  
 Hawnby, Map, 494  
 Haworth, 39  
 Hawsker Bottoms, Map, 485, 492  
 Haxby Boring, 252  
 Hayburn Wyke, 45, 247, 253, 276, 303  
 " Fossil Fruits, 117  
 Hazel Grove, Map, 489  
 " Hill, *Pterinopecten*, 401  
 Hazelhead, Map, 487  
 Headingley, 407  
 " Map, 499  
 HEALEY, M., 361  
 Health Resorts, 172  
 " Resorts, Harrogate, 179, 218  
 HEARNE, JOHN, 1, 10  
 " T., 14, 18  
 'Heat Action' on Sandstones, 93  
 'Hebbles' in Humber, 463  
 Hebden Bridge, 222, 226, 235, 253, 346  
 361, 391, 427  
 " " *Acrolepis*, 420  
 " " Boulders, 63  
 " " Fossil Fish, 133, 339  
 " " *Lit. and Sci. Soc.*, 391  
 " " *Lit. and Sci. Soc.*  
*Reports*, 427  
 " " *Pleuromutilus*, 360,  
 378  
 HEBORT, E. J., 480  
 Heck, Glacials, 263  
 Heckmondwike, Boring, Map, 489  
 " Map, 500  
 " Sanitation, 402  
 Hedon, 356  
 " Borings, 200, 355  
 " History of, 272, 277  
 " Map, 500  
 Heights of Chalk, 284  
 " Skyethorne, 266  
 Helices, Distribution of, 433, 444  
*Helicogona arbustorum*, 475  
 Heligoland and Speeton Fossils, 256,  
 265  
*Helix aspersa*, 433  
 " *memoralis*, 433  
 " *pomatia*, 433  
 Hellifield, Carboniferous, 434  
 " Water Supply, 170  
 Helln Pot, 415  
 Helm Knot, Phyllopods, 206  
 Helmsley, 259, 388  
 " Fever at, 282  
 " Map, 479, 481, 494  
 " Moor, Map, 494  
 " Naturalists at, 182  
 " Sanitation, 397  
*Hemicidaris intermedia*, 73  
 Hemingbrough, Map, 500  
 HEMINGWAY, W., 184, 197, 205, 265,  
 295, 428  
 Hemsworth Coal, 449  
 " Colliery, 152  
 " Iron, 151  
 " Map, 501  
 HENDERSON, JOHN, 76, 92  
 " T. F., 209, 214  
 Hendshope, 115  
 HENSLOW, G., 100, 249, 392  
 HENWOOD, G., 81  
 Heptonstall, Map, 484  
 " Moor, Map, 499  
 HERDMAN, W., 343  
 HERRIES, R. S., 304, 380, 428, 430  
 HESLOP, M. K., 449, 450, 451  
 Hesse, 271  
 " Ammonite at, 189  
 " Augite Syenite, 432  
 " Boulders, 270  
 " Chalk, 116

- Hesse Chalk Quarries, 307  
   " Clay, 119, 354  
   " Drift, 115  
   " Earthquake, 360  
   " Gravels, 250, 279, 290, 309  
   " *Holaster planus*, 473  
   " Map, 500  
   " Raised Beach, 378  
   " Reindeer, 403  
   " Rhomb-porphry, 290  
*Heterangium*, 279, 280, 290  
 HEWETSON, HENRY BENDELACK (Obituary), 312  
 HEWSON, W., 304  
 HEY, W. C., 197, 232, 241, 352, 361, 412  
 HICK, T., 157, 159, 162, 164, 167, 169, 173, 174, 188, 190, 249, 265, 275, 284, 295  
   " THOMAS, Obituary, 292, 297  
 Hickleton Main Colliery, 261, 300  
 HICKLING, GEORGE, 391, 428, 439  
 HICKS, H., 304  
 Hidden Coalfields, 393  
 HIDDEN, W. E., 205  
 HIGGINS, B., 22  
   " W. M., 113  
 High Field Pit, Map, 487  
   " Flats, Map, 487  
   " Force, 128, 143, 239, 355  
   " Hoyland, Map, 488  
   " Level Drift, 142  
   " Moor, Map, 485  
   " Teesdale, Limestone, 351  
 Higham Colliery, Map, 488  
 Highburton, Map, 487  
 HILBERT, T., 13  
 Hildenley, 6  
   " Map, 486  
 Hilderthorpe Cliff, 216  
*Hildoceras levisoni*, 424  
 HILEY, J. S., 61, 92  
 HILL, C. A., 377, 380, 388, 391, 460, 470  
   " E., 275, 344  
   " J. S., 134, 135  
   " WILLIAM, 214, 229, 235, 275, 276, 284, 352, 353, 439, 451  
 HIND, W., 257, 265, 275, 284, 285, 293, 295, 305, 314, 321, 323, 332, 334, 342, 344, 352, 361, 371, 375, 380, 385, 391, 392, 396, 401, 403, 412, 470  
 HINDE, G. J., 179, 205, 206, 214, 232, 257, 262, 263, 265, 275, 285  
   " K. A., 275, 277  
 Hindersheaf, 6  
 Hinderwell, Map, 492  
 HINDERWELL, T., 24, 29, 49, 50  
 Hipperholme, 101  
   " Sandstone, 382  
 Hippopotamic Remains, Leeds, 79  
*Hippopotamus amphibius*, 425  
 Hippopotamus, Wortley, 104  
 HIRSCHFIELD, J., 139  
 Histological Index to Williamson's Memoirs, 261  
 Histology of *Stigmara*, 208  
 'Historia Animalium,' 7  
 Historia Rievaulensis, 40  
 'Historic Fossil Cycads,' 405  
 History of Barnby Moor, 442  
   " Bowling Ironworks, 137  
   " Bradford, 61, 108  
   " British Mammals, 436  
   " British Museum Collections, 363, 367  
   " Chalk, 325  
   " Claro, 126  
   " Cleveland, 27, 68, 69  
   " Craven, 26, 30  
   " Collections, Brit. Museum, 363, 367  
   " Doncaster, 25, 208  
   " Coal, 155  
   " Mining, 174  
   " Driffeld Museum, 325  
   " Easby, 371  
   " East Hull, 351  
   " East Yorks., 443, 463  
   " Filey, 473  
   " Flora, 217  
   " Geology, 446  
   " Great Sheffield Flood, 102  
   " Harrogate, 59, 125, 174  
   " Hedon, 272, 277  
   " Holderness, 21, 59  
   " Huddersfield, 90, 114  
   " Hull, 21, 24, 103, 109  
   " Imbanking, 4, 18  
   " Iron Ores, 224  
   " Iron Trade, 179  
   " Knaresborough, 28, 65  
   " Leeds, 32, 104  
   " Mammalia, 310  
   " Mineral Waters, 171  
   " Netherdale, 58  
   " North Sea Basin, 414  
   " Nunburnholme, 393  
   " Pickering, 371  
   " Richmondshire, 398  
   " Ripley, 109  
   " Ripon, 26, 33, 56, 58  
   " Rosendale, 114  
   " Rotherham, 159  
   " Scarborough, 172  
   " Seed-bearing Plants, 374  
   " Selby, 112, 157  
   " Stockton, 24

- History of Sulphur Well, 146  
 " Sutton, 281, 320  
 " Swine, ' 40  
 " Vale of Mowbray, 90  
 " Wensleydale, 83  
 " Whorlton, 410  
 " Withernsea, 441  
 " York, 82, 83, 86, 436  
 " Yorkshire, 123, 313, 333,  
     352, 361  
 " Fletcher, 322  
 " 'Victoria,' 393  
 " Geological Soci-  
     ety, xxix., 223  
 " Geology, 215  
 " Nat. Union, 472  
 " *Zamia gigas*, 122  
 Hitchin Stone, (Hitchingstone), 157,  
     194, 212  
 Hoare Library, xxxiii.  
 HOARE, R. C., xxxiii.  
 Hobby, Natural History as a, 374, 404  
 HOBKIRK, C. P., 90, 114, 135, 144, 146,  
     265, 268  
 HOBSON, BERNARD, 334, 371, 424, 428,  
     429, 436, 439, 440  
 Hodder, Banks of, 270  
 " Fossil Algæ, 187  
 " Map, 482  
 " Valley, 264  
 HODGSON, C., 125  
 HOFFMANN, F., 12, 14  
 HOFMANN, —, 78, 79, 118  
 " A. W., 79, 81  
 HOGG, J., 45  
*Holaster*, New, 214, 215  
 " *planus*, Hessle, 473  
 Holderness, 21, 37, 38, 40, 345, 429,  
     469  
 " Boulders, 264, 275, 299,  
     309  
 " Clays, 158  
 " Coast, 179, 331  
 " " Boulders, 311  
 " " Erosion, 79, 373  
 " Configuration of, 302  
 " Drift, 111  
 " Drift, Fossils in, 433  
 " Elephant in, 301  
 " *Elephas antiquus*, 432  
 " Excursion to, 183  
 " Extinct Animals, 299  
 " Fossil Mammals, 122  
 " Geology of, 192  
 " Glacial History of, 432  
 " Glacials, 463  
 " *Gleanings*, 200  
 " Gravels, 278, 356, 387, 395  
     403, 404, 418  
 " History of, 59  
 " Interglacials, 289  
 Holderness, Lacustrine Deposits, 111  
 " Lake Dwellings, 201, 234  
 " Map, 481  
 " Norwegian Boulders, 304  
 " Peat, 52, 290  
 " Prehistoric Man, 327  
 " Scottish Rocks in, 353  
 " Tusk of *Elephas*, 317  
 " Walrus, 365  
 " Water Supply, 375  
 HOLDSWORTH, B. J., 249  
 Hole of Horcum, 273  
 HOLGATE, B., 149, 188, 190, 194, 197,  
     214, 223, 224, 232, 239, 240, 241,  
     242, 244, 245, 249, 257, 272, 275,  
     295, 305, 319, 323, 412  
 HOLINSHED, —, 1  
 'Holinshed's Chronicle,' 1  
 HOLLAND, THOMAS, H., 388, 392, 470  
 " T. P., 1  
 HOLLIN, —, 116  
 HOLLINS, —, 128  
 Hollins' Handbook for Harrogate, 77  
 HOLLINS, T., 87  
 Holym, Map, 500  
 Holme on Spalding Moor, 328  
 " Map, 499  
 " Valley, 222, 223  
 HOLMES, JOHN, 205, 451, 460, 467,  
     470  
 Holmes, Map, 487  
 HOLMES, THOMAS VINCENT, 154, 159,  
     242, 244, 477, 478, 488, 490, 500,  
     501, 502  
 Holmfirth, 220  
 " Map, 501  
 " Submerged Forest, 144, 145  
 Holmpton, Boulders, 328  
 Holocene Mollusca, Clapham, 470  
 " Great Mitton, 413  
 HOLROYD, W. F., 281, 285, 291, 295,  
     331, 334  
 HOLT, H., 58, 59, 61  
 Holwick, Map, 491  
 " Head, Striæ, 297  
 HOME, G., 362, 371, 380, 401  
*Home Office Reports*, 301, 313, 319  
 HOME, PERCY, 376, 380  
 Homœomorphy, Jurassic Brachiopoda,  
     332  
 Homotaxial Equivalents, Culm, 361,  
     412  
 HON, H. LE, 79  
 Honley, Map, 501  
 HOOD, J. DENNIS, 249  
 Hook, Map, 500  
 Hooker and Fossil Plants, 453  
 HOOKER, JOSEPH, Biography, 453  
 Hool Wood Pit, Map, 491  
*Hoploparia prismatica*, 72  
 Hopton, Map, 489

- Horbury, 142, 357  
     " Bog-oak, 372  
     " Boulders, 255, 272  
     " Shap Granite, 343  
 Horcum, 273  
 Horizontal Sections, 113, 131, 184, 241  
     242  
     " Sections, (A. H. Green), 154  
     " Thrusting, 312  
 Horley Green, 24  
     " " Mineral Water, 58  
 HORNE, JOHN, 470, 476  
     " W., 135, 194, 197, 202, 205,  
     295, 379, 380  
 Hornsea, (Hornsey), 12, 37, 217, 280,  
     308, 317, 320, 419  
 'Hornsea, Account of,' 70  
 Hornsea Boulders, 270, 278, 280, 298,  
     328, 348, 402  
     " Bygone, 372  
     " Coast Changes, 454, 463  
     " Coastline, 403  
     " Earthquake, 466  
     " Erosion, 261  
     " Fish Remains, 336  
     " Geology of, 268  
     " Guide, 261, 263  
     " Lacustrine Deposits, 394  
     " Lias Fossils, 433  
     " Lion, 365  
     " Map, 481, 499  
     " Mere, 403  
     " " Plan, 456  
     " Mollusca, 263  
     " Peat, 307, 416  
     " *Perca*, 336  
     " Post-Glacials, 384  
     " Water, 316  
     " Water Supply, 375  
 Hornstone, 401  
 Horse Bridge Clough, 339  
 'Horse Fossil,' 457  
 Horsetails and Allies, 401  
 HORSFALL, J., 175, 179, 180, 214, 216  
 Horsforth, 212, 407, 410  
     " Cup and Ring Workings,  
     229  
     " Map, 490  
     " Rough Rock, 442  
     " Valley, Glacials, 295  
 Horton, 259, 391  
 HORTON, W. S., 95, 102  
 Horton in Ribblesdale, 247, 252, 253,  
     407, 411  
     " Map, 495  
 HORWOOD, A. R., 439  
 Hotham Carrs, 327  
     " Geology of, 88  
 HOTTEN, J. C., xxxiii.  
 HOUGHTON, F. T. S., 157  
 Houghton Main Colliery, 151  
 Houghton, Map, 482  
 Houses of Parliament, Stone for, 57, 59,  
     66, 71  
 HOUSMAN, J., 25  
 HOUSTON, A. C., 460  
 Hovingham, Map, 495  
     " Spa, Map, 486  
     " Springs, 75  
 Howardian Hills, Map, 485, 486  
 HOWARTH, E., 331, 439, 442  
     " J. H., 265, 295, 296, 305,  
     314, 315, 320, 321, 323, 324, 334,  
     344, 353, 356, 362, 363, 371, 372,  
     380, 392, 401, 412, 419, 425, 426,  
     428, 429, 433  
 Howden, Enteric Fever, 171  
     " Map, 477, 500  
     " Moors, Map, 483, 502  
     " Sanitation, 370  
 Howdenshire, Water, 335  
 HOWE, J. ALLEN, 334, 380, 382, 429  
 Howe Tumulus, 259  
 HOWELL, H. H., 232, 238, 241, 242, 479,  
     480, 485, 494, 495  
     " HENRY H. (Biography), 310  
 Howgill Fell, 67  
     " Fells, Topography, 414  
     " Map, 493  
 HOWORTH, H. H., 205, 250, 257, 264,  
     265, 269, 275, 278, 285, 295, 314, 371  
 HOWSE, R., 224, 232, 233  
 HOWSON, W., 73  
 Hoyland Nether, Coal at, 142  
     " Map, 483, 487  
     " Silkstone Colliery, 310  
 HOYLE, W. E., 314  
 Huby Borings, 267  
 Huddersfield, 24, 90, 216, 313, 420, 421,  
     456, 476  
     " Calamite Leaves, 407  
     " Canal, 24  
     " Coal, 172  
     " Fossil Insects, 110  
     " *Geological Surv. Mem.*,  
     125  
     " Geology of, 96  
     " History of, '90, 114  
     " Map, 478, 483, 487, 489,  
     500  
     " Sandstones, 93  
 Huddlesstone Dolomite, 333  
     " Limestone, 119  
     " Limestone, Analysis, 150  
     " Stone, Analysis, 361  
 HUDDLESTON, W. H., 135, 139, 144, 147,  
     149, 151, 154, 164,  
     169, 175, 178, 179,  
     184, 190, 205, 214,  
     215, 224, 233, 242,  
     250, 254, 257, 265,  
     275, 285, 305



- HUDLESTON, WILFRID HUDLESTON,  
    Memoir, 358  
    "    WILFRID HUDLESTON,  
        Obituary, 416, 418,  
        421  
*Hudlestonia sinon*, 239, 399  
HUGHES, T. MCKENNY, 111, 114, 127,  
    128, 131, 135, 144, 197, 205, 215,  
    266, 334, 344, 380, 392, 412, 477,  
    478, 479, 480, 492, 493, 495  
HUGILL, J., 47  
*Hull*, 13, 23, 37, 40, 59, 60, 70, 87, 91,  
    95, 98, 120, 189, 195, 200, 221, 236,  
    245, 246, 262, 263, 268, 272, 277,  
    281, 308, 317, 319, 342, 351, 372,  
    373, 374, 375, 376, 417, 418, 420,  
    441, 443, 454, 474  
*Hull*, xxxv., 21, 23, 24, 81, 317, 327,  
    349, 470  
    "    Albert Dock, 139  
    "    and Barnsley Railway, 181, 210  
    "    "    "    Geology of,  
        195  
    "    "    "    Minerals,  
        181  
    "    *and East Riding Portfolio*, 201  
    "    *and East Yorkshire Teacher*, 364,  
        374, 404  
    "    and Selby Railway, 66  
    "    Boring, 432  
    "    Boulders, 260  
    "    Buried Forest, 194  
    "    *Conference Souvenir*, 453  
    "    Diatomaceæ, 90, 93, 105, 335  
    "    Diphtheria, 152  
    "    Docks, Excavations, 111  
    "    "    Sections, 332, 351  
    "    EDWARD, 92, 95, 97, 100, 102,  
        107, 108, 114, 125, 131, 139, 141,  
        142, 144, 148, 149, 159, 165, 166,  
        169, 175, 206, 233, 266, 267, 296,  
        429, 478, 482, 501, 502  
    "    Evolution of, 418, 443  
    "    Excavations, 454  
    "    Excursions, 78  
    "    *Express*, 191  
    "    Foraminifera, 280  
    "    Forest Bed, 111, 200, 248, 268  
    "    Geological Photo. Committee, 325  
    "    "    Soc., 261  
    "    "    Soc. Library, 456  
    "    Geologists, Excursions, 220  
    "    Geology in, 301  
    "    Gravels Around, 307, 317  
    "    History of, 103, 109  
    "    "    of East, 351  
    "    Humber Rights, 98  
    "    *Literary Club Magazine*, 327, 418,  
        443, 463  
    "    Literary and Phil. Society, 91  
    "    Map, 477, 500  
*Hull*, Museum, xxxv., 91, 291, 346, 347,  
    365, 374, 383, 403, 404, 417, 418,  
    443, 454, 462, 463  
    "    *Museum Publications*, 346, 347,  
        365, 374, 383, 385, 394, 395, 403,  
        404, 417, 418, 432, 443, 462  
    "    Natural Aspects of, 373  
    "    Naturalists' Field Club, 300  
    "    Nature in, 453  
    "    Newspapers, 252  
    "    Origin of, 420  
    "    Peat, 125  
    "    Plans, xxxv.  
    "    Post Glacials, 302  
    "    *Quarterly*, 189  
    "    "    *and E.R. Portfolio*, 193  
    "    River, Changes, 236  
    "    Sanitary State of, 172  
    "    Sci. and F.N. Club, 298  
    "    Section at, 173  
    "    Shap Granite, 417  
    "    Submerged Forest, 135  
    "    Water, 95, 171, 225  
    "    "    Supply, 317, 368, 375  
HULL'S 'Carboniferous Classification',  
    148  
'Hull's Contribution to Science,' 355  
Hullshire Gleanings, 200  
Human Fibula, Victoria Cave, 134  
    "    Skeleton in Peat, 125  
Humber, 9, 13, 26, 42, 44, 200, 320  
    •    "    and Tributaries, 341  
    "    Bar, 236  
    "    Boulder Clay in, 463  
    "    Changes, 145  
    "    Chart, (1725), 206  
    "    Deposits, Chemical Consti-  
        tution, 81  
    "    Detritus, 342  
    "    Development of, 273  
    "    District, Geology, 431  
    "    "    Notes, 384  
    "    Erosion, 273  
    "    Estuary, Tides and Waves,  
        386  
    "    Foreshore, 98  
    "    Gap, 314  
    "    Gap, Drifts, 299  
    "    'Hebbles,' 463  
    "    Islands, 377  
    "    Lake, 206  
    "    Lost Towns of, 221  
    "    Mud, 300  
    "    "    Origin, 171, 307  
    "    Outfall of, 119  
    "    Physical Features, 80  
    "    Reclaiming Land, 98  
    "    Spurn, 73  
    "    Tunnel, 466  
    "    Valley, 283  
    "    "    Deposits, 213

- Humber, Valley Gravels, 206  
     " Warp. Source, 339  
 HUME, —, 32  
     " W. F., 257, 266, 296  
 HUMMEL, E. L., 438, 439  
     *Hungary*, 103  
 Hunmanby, Boulders, 210  
     " Chariot Burial, 395  
     " Map, 495  
 Hunslet, Coal, 194  
     " Map, 484, 490  
 Hunsworth Colliery, Map, 489  
 HUNT, A. R., 371  
     " R., 81, 92, 114, 145, 159, 164,  
     169, 182, 271, 291  
 Huntcliff, Lias Fossils, 304  
     " *Solaster*, 211  
 HUNTER, A., 25  
     " ADAM, 27, 35, 47, 51, 56, 68  
     " E., 144, 145  
     " J., 47  
     " K., 25  
 Huntingdonshire Boulders, 269  
 Huntington, Map, 497  
 HUNTINGTON, P., 460  
 HUNTLEY, LOCKWOOD, 476  
 HUNTON, L., 55  
 HUTCHINGS, W. M., 276, 277, 305  
 HUTCHINSON, T. N., 154, 159  
     " H. N., 250, 257, 285, 291  
     " J., 114  
 Hutton Collection, Catalogue, 224  
 HUTTON, G., 48  
     " J., 19, 20, 30  
     " W., 50, 51, 52, 55  
     *Hutton's Abridg.*, 5, 7, 9, 10, 16  
 Huttons Ambo, Map, 486  
 Hutton's 'Fossil Flora,' 243  
 Huxley Lecture, 425  
 HUXLEY, T. H., 118, 119  
 Hyæna, 37, 345  
     " Bed, Victoria Cave, 151  
     *Hyalostelia smithii*, 205  
 Hyalonema, Carboniferous Limestone,  
     109  
     *Hybodus obtusus*, Malton, 217  
 Hydraulic Limestone, Analysis, 200  
 Hydraulics of Tidal Rivers, 260  
*Hydreionocrinus*, 448  
 Hydrogeological Map, 174  
 'Hydrologia Chymica,' 4, 5, 6  
 'Hydrological Essays,' 5  
 Hydrology, 335  
*Hydrophilus piceus* in Peat, 350  
 'Hydrotherapeutics,' 122  
*Hypocrinus*, 465  
     " Nidderdale, 457  
 I'ANSON, J. C., 353  
 Ice Age, 135, 148, 151, 223, 260, 275,  
     355, 444, 476  
 Ice Age, and Plants, 442  
     " Cause of, 258  
     " Epochs, 279  
     " in Bradford,' 373  
     " in North America,' 227, 237,  
     447  
     " in Wharfedale, 391  
     " Question, 313  
     " see Glacial Period.  
 Ice-Borne Boulders of Yorks. 401  
 Ice-Flows, Trent, 469  
 'Ice or Water,' 275, 371  
 Ice, Physical Properties, 151  
     " Present and Past, 311  
     " Sheets, 260  
     " and Boulders, 285  
     " British, 422  
     " Limits of, 422  
     " Names, for, 332, 335  
     " North Sea, 304  
     " North West Yorks., 129  
     " Norwegian, 315  
     " Scandinavian, 306, 314,  
     409, 461  
     " Work of, 207  
     " Versus Water, 295  
     " Work in Edenside, 204  
     " Past and Present, 281  
 Ichthyography of Coalfield, 153  
 Ichthyopterygia, Classification of, 216  
*Ichthyosaurus*, 35, 51, 53  
     " *acutirostris*, 59, 110, 170  
     " *communis*, 37  
     " *intermedius*, 59  
     " *platyodon*, 170  
     " Skull, Whitby, 165  
     " *thyreospondylus*, 347, 348  
     " Whitby, 263  
     " *zelandicus*, 165, 216  
 IDDINGS, JOSEPH P., 460  
 Identity of Coal Plants, 354  
 Idle, 188  
     " Megalichthys, 185, 191  
 Igneous Dykes, 214  
     " Rocks, Basic, 249  
     " Classification of, 460  
     " Composition of, 460  
     " Distribution, 284  
     " Natural History, 284,  
     411  
     " Occurrence, 460  
     " Petrography, 200  
     " Texture of, 460  
 Ilkley, 25, 35, 239, 308, 438  
     " Fossil Tree, 201, 202  
     " Geology of, 201  
     " Map, 478, 485, 498  
     " Plant Remains, 194  
     " Spa, 237  
     " Water, 468  
 ILLINGWORTH, S. R., 429

- INCHBOLD, T., 43**  
 Index to Archæological Papers, xxxii.  
   " Brachiopoda, 182  
   " Proceedings Geological Association, 435  
   " Quarterly Journal Geological Society, Vol. i-l., 291  
   " Metallurgical Literature, 342  
   " Mining Literature, 332  
   " W. C. Williamson's Memoirs, 261, 269  
   " Yorkshire Geological and Polytechnic Society, 351  
   " Yorks. Organic Remains, 426  
 Indicator-Boulders, 461  
   " Scandinavian, 415  
 'Industrial Geology of Bradford,' 133  
 Industrial Products, 280  
 Inferior Oolite Ammonites, 221, 229, 388  
   " " Flora, 396  
   " " Footprints, 399  
   " " Gasteropoda, 205, 214, 224, 233, 250, 265, 275, 285  
   " " Mollusca, 100  
   " " Plants, 227, 365  
   " " Sands, 84  
   " " Sub-divisions, 93  
 Infra-Glacial Rubble, 363  
   " Rubble, Shells in, 353  
 Infralias, Yorkshire, 128  
 Infusorial Siliceous Rocks, 70  
**INGHAM, W., 380**  
**INGLE, H., 169, 171**  
**Ingleborough, 9, 19, 20, 30, 44, 207, 213**  
   238, 264, 416, 458, 462  
   " Basement Beds, 381  
   " Beds, 198  
   " Carboniferous, 392, 412  
   " Caves, 72, 125, 215, 231, 266, 297, 300, 322, 332, 333, 352  
   " Caves, Stalagmites, 134  
   " Chert, 131  
   " Devonian, 392  
   " Fault Fissure, 369  
   " Geology of, 112, 119, 230, 380  
   " Height of, 53  
   " Limestone, 154  
   " Map, 495  
   " Model of, 433  
   " Old, 367  
   " Palæontology, 392  
   " Phillips on, 77  
   " Pot Holes, 322, 332, 379, 388  
   " Section of, 313  
   " Silurian, 392  
**Ingleborough Speleology, 277**  
   " Stratigraphy, 344, 380, 392  
   " Swallow Holes, 184  
   " Underground Waters, 369  
   " Waterfalls, 201  
**Ingleby Greenhow, Boulders, 222**  
   " Map, 493  
**Ingleton, 188, 202, 211, 228, 239, 242,**  
   259, 270, 379, 407, 413, 427, 435, 470, 472  
   " Basement Beds, 455  
   " Boulders, 260  
   " Coalfield, 400, 426, 448  
   " *Clisiophyllum*, 455  
   " Felspathic Sandstone, 382  
   " Geology of, 197  
   " Glacial Action, 211  
   " 'Granite,' 235, 245, 376  
   " Granite Quarries, 358  
   " Limestones, 163  
   " Map, 479, 486, 495  
   " Phillips's Dyke, 235  
   " Physical Features, 223  
   " Porphyry, 119  
   " Silurian, 221  
   " Slates, 119  
   " Trap Dykes, 221  
**Ingletonian Series, 394**  
**INGLIS, G., 33**  
   " J., 65, 71  
**INGRAM, DALE, 18**  
 Inland Watering Places, 237  
 Inocerami, Chalk, 447  
   " Cretaceous, 446  
*Inoceramus involutus*, Ganton Wold, 189  
   " *labiatus*, 446  
   " *lobatus*, 447  
**Inoceramus, Lias, 79**  
*Inoceramus*, Monograph on, 456  
   " *sulcatus*, 446  
   " *tenuis*, 446  
**Insect Wings in Coal, 343**  
**Insecta, 300**  
**Insects, Coal, 110**  
   " Geographical Distribution, 390  
   " Fossil, 67  
   " Lias, 110  
*Institute Notes*, 374  
**Intake, Map, 487**  
**Integument on Saurian Paddle, 263**  
**Inter-Glacial Gravels, 278**  
   " Problem, 382, 392, 457, 461  
   " Submergence, 254  
**Interglacials and Drifts, 382**  
   " East Yorks., 392  
   " Holderness, 289  
 'Intermediate Text Book,' 315

- Intermittent Spring, Malham, 165  
*International Geological Congress*, 188,  
 190, 194, 227, 456, 470  
 Introduction to Geology, 469  
     " Minerals, 429  
     " Petrology, 241, 474  
     " Protozoa, 342  
 Intrusive Whin Sill, 151  
 Invertebrate Palæontology, 261, 290,  
 349, 422  
 Invertebrates, Fossil, 300  
     " Guide to, 387, 398, 436  
 Investigation of Rivers, 466  
 Imatra, 285  
 Implement, Cave, 369  
 Implements, Stone and Flint, 114,  
 293  
*Iris pseudacorus*, Peat, 417  
*Irish Naturalist*, 280, 442  
*Iron*, 130, 132, 142  
 Iron, 28, 45  
     " and Steel Institute, 141  
     " Industries, 147, 151  
     " Cleveland, 147, 155, 208  
     " Analysis, 116  
     " Disposition of, 114  
     " in England, 97  
     " in Hornsea Water, 316  
     " Industries, 136, 170, 175  
     " West Riding, 140  
     " Industry, Position of, 83  
     " Manufacture, 99, 101, 129, 149  
     " Mining, 97, 455  
     " Mines, Cleveland, 142  
     " Clivinger, 161  
     " Ore, Cleveland, 77, 399  
     " Distribution, 114, 176  
     " Middlesbrough, 75  
     " Stourton, 190  
     " Supplies, 388, 399  
     " Ores, 40, 131, 141, 258  
     " Analyses, 84, 101, 103  
     " Committee, 123  
     " History, 224  
     " Liassic, 108  
     " of Britain, 84, 114  
     " Oolitic, 108  
     " Yorkshire, 198  
     " Pyrites in Millstone Grit, 161  
     " Relations of, 118  
     " Spathic Carbonate of, 66  
     " Trade, Cleveland, 381  
     " History, 179  
 Ironfields, New, 108  
 Ironstone, 76  
     " Analysis, 129  
     " Brookite in, 363, 373  
     " Cleveland, 76, 86, 94, 102,  
         113, 115, 116, 117, 121,  
         122, 124, 127, 136, 137,  
         139, 142, 150, 161, 199,  
         295, 394, 405, 433, 435,  
         458  
 Ironstone, Cleveland, Analyses, 115  
     " Composition, 85  
     " Gallium in, 294  
     " Lias, 102  
     " Mining, 452  
     " Mining, Cleveland, 137  
     " Oldest Trigonion in, 129  
     " Oolitic, 84  
     " Origin of, 131  
     " Origin of Cleveland, 86  
     " Rosedale, 91, 344  
     " Rosedale Abbey, 87, 121  
     " Saltburn, 106  
     " Series, Sections in, 88  
     " Smelting Furnace on Whit-  
         by Moors, 441  
     " Upleatham, 129  
     " Weathering, 113  
     " Workings, 10  
 Ironworks at Bowling, 137  
 Irregular Echinoids, Chalk, 384  
 Irton, Boring, 184  
     " Underground Waters, 183  
 IRVING, A., 190, 215  
     " JOHN, 371, 381, 412  
 Islands in Humber, 377  
 Isle of Axholme, 262  
     " Man, 386, 402, 440  
 ISMAY, J., 215  
 Iso-diametric Lines, 97  
*Isodonta*, 86  
 Isurium, 76  
 Itinerarium Curiosum, 11  
  
 Jackey Wood, Map, 489  
 JACKSON, C., 121  
     " E., 206  
     " J., 65, 66  
     " J. W., 410, 413, 439, 470  
 Jaggar Park Wood, Map, 490  
*Jahrb. L. k.-k. Geol. Reich.*, 226  
 JAMES, J., 61, 108  
     " M. P., 179, 180  
*Jamesoni* Zone, 304  
 Japan, Jurassic Plants, 227  
 JAQUES, J., 23, 25  
 JARDINE, WILLIAM, xxxii.  
 JARS, G., 18, 19, 20  
 Jaw-apparatus of Annelid, 285  
 JEANS, J. S., 151, 154, 381  
 JEFFCOCK, PARKIN, 97  
 JEFFERSON, J. B., 36  
 JEFFERYS, T., 18  
 JEFFREYS, J. G., 140, 184, 185  
 JEFFS, O. W., 224, 233, 242, 250, 257,  
 266, 276  
 JENKINS, H. M., 118, 119  
     " RHYS, 470  
 JENKINSON, S., 276

- Jermyn Street Museum, 433  
 Jervaulx Abbey, Map, 494  
 Jet, 250, 400  
   " Analyses, 404  
   " Manufacture, 133  
   " Mining, 176  
   " Origin of, 117, 337, 346, 384, 404  
   " Ornaments, Prehistoric, 128  
   " Structure of, 337  
   " Trade, Whitby, 93  
   " Whitby, 209  
 Jill Lane, Map, 489  
 Jockey Hole, 368  
 JOHNS, COSMO, 362, 372, 381, 385, 392,  
   401, 403, 408, 413, 416, 424, 426,  
   428, 429, 437, 439, 440, 451,  
   470  
 JOHNSON, J., 64  
   " J. W. HAIGH, 372, 460  
   " W., 381  
   " W. and A. K., 286  
 JOHNSTON, J. F. W., 57  
 JOHNSTONE, —, 102  
   " J. V. B., 64  
   " J. W. H., 440  
   " MARGARET N., 169, 171  
   " MARY A., 392, 401, 413,  
     429, 451  
 Jointing, Mountain Limestone, 197  
 Joints, 465  
   " Norber, 197  
   " Thrusting in, 312  
 JONES, —, 118  
   " ERNEST, 224, 233, 242, 243, 250  
     257, 266, 410  
   " JOHN, 114, 123, 125, 131  
   " J. R., 73  
   " T. A., 392  
   " T. RUPERT, 56, 65, 79, 80, 85,  
     100, 104, 107, 108, 109, 133,  
     135, 140, 141, 145, 159, 175,  
     182, 184, 190, 191, 197, 198,  
     202, 204, 206, 208, 215, 250,  
     251, 266, 276, 286, 305, 310,  
     314, 319  
   " W. RUPERT, 331, 334, 448, 451  
 JORDAN, J. B., 154, 155, 276  
 Journ. Anthropol. Inst., 131, 134, 135,  
   148, 151, 159, 303, 425  
   " Anthropol. Soc., 124  
   " Assoc. Archit. Soc., 327  
   " Birmingham N.H. Phil. Soc.,  
     296  
   " Botany, 111, 124, 135  
   " Brit. and For. Health Resorts,  
     253  
   " Brit. Med. Soc., 175  
   " Brit. Soc. Min. Students, 262,  
     267, 333  
   " Chem. Industry, 449  
   " Chem. Soc., 81, 129, 131, 146,  
     168, 171, 255, 282, 295, 311,  
     331  
 Journ. Coll. Sci. Imp. Univ. Japan,  
   227  
   " Conchology, 173, 411, 413  
   " de Phys., 25, 37  
   " Fed. Inst. Brewing, 303  
   " Geol., 46, 294  
   " Geol. Soc., 297  
   " Geology, Chicago, 274  
   " Iron and Steel Inst., 124, 125,  
     137, 144, 147, 151, 399  
   " Linn. Soc., 249, 416, 453  
   " Liverpool Geol. Assoc., 271  
   " Manchester Geol. Soc., 335, 455  
   " Micro. Soc., 93  
   " Nat. Phil. Chem. and Arts, 24,  
     27, 28, 30  
   " Northampton, N. H. Soc., 193,  
     373  
   " Prakt. Chem., 57, 67  
   " Roy. Agric. Soc., 64, 67, 70, 71,  
     76, 92, 118, 152  
   " Roy. Dublin Soc., 99  
   " Roy. Inst., 48  
   " Roy. Mic. Soc., 193, 212, 229,  
     235, 255, 279, 362, 374, 383,  
     394, 401  
   " Roy. Soc. Ireland, 149  
   " Sanitary Inst., 306, 309  
   " Soc. Arts, 84, 133, 158, 177, 188,  
     337, 359, 361, 388  
   " State Medicine, 319  
   " Trans. Victoria Inst., 215  
 JOWETT, A., 296, 298, 324, 325, 334,  
   336, 372, 373, 465, 471  
 JUDD, J. W., 114, 121, 125, 139, 140,  
   198, 215, 286, 296, 305, 401, 440  
 JUKES, ANDREW, 91, 92  
 JUKES, J. B., 85, 97, 128  
 JUKES-BROWNE, A. J., 184, 191, 195,  
   198, 214, 215, 218,  
   233, 251, 258, 272,  
   275, 276, 305, 307,  
   324, 331, 344, 353,  
   362, 377, 381, 440,  
   448, 451, 461, 477  
   " ALFRED JOHN (Obitu-  
     ary), 473  
 Junction, Silurian and Carboniferous,  
   153  
   " Millstone Grit and Coal, 410  
 Jura of Germany, etc., 74  
 Jurabildungen, 171  
 Juraformation, Englands, 84  
 Jurassic, 190, 211, 215, 462  
   " Ammonites, 262, 361  
   " Brachiopoda, 143, 152, 287,  
     332, 359  
   " Bryozoa, 181, 284  
   " " Catalogue, 264

- Jurassic, Bryozoa, Revision of, 274  
     " Committee on, 188  
     " Fern Spores, 445  
     " Ferns, 455  
     " Fishes, 261, 270  
     " Flora, 337, 365, 449, 458, 468,  
         475  
     " " Cleveland, 429  
     " " East Yorkshire, 326  
     " " of Yorkshire, 442  
     " Floras, 346  
     " " Comparisons, 431  
     " Foraminifera, 140  
     " Fossils, Distribution, 174  
     " Gasteropoda, 184, 205, 214,  
         224, 233, 250, 265, 285,  
         297  
     " Gasteropoda, Monograph, 275  
     " *Gervillia*, 441  
     " *Isodonta*, in, 86  
     " Nautili, 231  
     " Plants, 73, 224, 326, 327, 394,  
         444, 455  
     " " Cleveland, 414  
     " " East Yorkshire, 383  
     " " Japan, 227  
     " " Polar, 327  
     " " Roseberry Topping,  
         464  
     " Rocks of Britain, 248, 266  
     " " Correlation, 123  
     " " Distribution, 86  
     " Saurians, 259  
     " Sponges, 257  
     " Water, 144  
     " Wealden, 297  
 Jurassics, Cambridge, 252, 253  
     " Correlation, 167, 207, 424  
 Jurassic, Russie, 225  
  
 Kaolinite, 399  
 KAYE, J. R., 362  
 KAYSER, E., 276, 277  
 Keadby, 111  
 KEEPING, W., 169, 179, 180  
 KEER, JAMES, 140  
 Keighley, 7  
     " Erratics, 138  
     " Geology of, 128, 148  
     " Glaciation, 324, 334, 372  
     " Hitchin Stone, 157  
     " Map, 478, 499  
     " Moor, 188, 194, 212  
*Keighley News*, 155  
 Kelbrook, Map, 498  
 Kelk, 308  
 KELK, J., 61, 92  
 KELL, A. R., 164  
     " G. J., 164  
 Kellaways Beds, 247  
     " Rock, 43  
  
 Kellaways Rock, Ammonites, 456  
     " " Brough, 327  
     " " Coast, 90  
     " " Fossils, 56  
     " " Nautili, 231  
     " Sands, 335  
     " Saurians, 327  
     " South Cave, 462  
     " The Name, 456  
 ' Kelloway ' Rock, 456  
 KELLY, —, 402, 413  
 Kelly's Directory, 149, 154, 371, 401,  
     402  
     " " West Riding, 361  
 Kelsea Hill, Kelsey Hill, 130, 349, 463,  
     469  
 Kelsey Hill, Bison, 417  
     " " Boulders, 349  
     " " Gravels, 387, 395  
     " " Mammalian Remains, 189  
     " " Mammoth Tooth, 443  
     " " Prestwich on, 95  
     " " Shells, 403, 404  
     " " Trachytic Boulders, 353  
     " " Walrus, 365  
 Kelvingrove Museum, 429  
 KEMP, G. G., 79  
*Kendal*, 64  
*Kendal, Geological Memoir*, 127  
     " Geology of, 211, 218  
*Kendal Mercury and Times*, 209  
 Kendal, Mica Traps, 157  
     " Museum, 212  
 KENDALL, F., 32  
     " HUGH P., 451, 453  
     " J. D., 198, 258,  
     " P. F., 198, 251, 254, 256,  
         258, 261, 266, 272, 273,  
         276, 286, 292, 296, 305,  
         306, 314, 315, 323, 324,  
         334, 336, 344, 353, 356,  
         362, 363, 368, 372, 378,  
         381, 392, 394, 402, 410,  
         413, 414, 429, 440, 451,  
         461, 465, 471  
 KENNEDY, CAROLINE, L., 169, 171  
 KENNION, —, 116, 128  
     " G., 67, 77, 87, 88, 100, 118,  
         121  
 KENNY, A. H., 251, 286  
 Kent Coalfield, 467  
 Kepwick, Map, 494  
     " Water, 157  
 Kettleless, 202, 241  
     " Glacials, 426  
     " Saurian, 67, 72  
 Kettlewell, 263  
     " Carboniferous, 392  
     " Map, 479, 487, 495  
 Keuper, 426  
     " Fossils, 467

- KIDSTON, R., 169, 191, 195, 198, 215,  
224, 233, 243, 251, 258,  
266, 286, 296, 306, 324,  
326, 344, 440
- Kidstones, Map, 494
- Kilburn, 341, 343, 344, 368
- " Boulders, 353
- Kildale, 239, 242
- " Borings, 460
- " in Cleveland, 232
- " Map, 492
- " Peat, 152
- Kildwick, Map, 498
- " Percy, Map, 486
- Kilham, Map, 497
- ' Killing Pits,' 298
- Killingbeck Park, Map, 490
- Kilnhurst, Fireclay, 427
- Kilnsea, 407
- " Crag Cave, 96
- " Map, 501
- " Shell Mounds, 183
- " Skull of Elephant, 317
- Kimeridge Clay, Belemnites, 122
- " Blake on, 138
- " Speeton, 56, 347, 462
- Kimeridgian, 288
- KINAHAN, G. H., 206
- KING, F. D., 215, 218
- " S., 215
- " v. THACKWRAY. Trial, 54
- " W., 73
- " W. B. R., 471
- " W. NORMAN, 440
- Kingdom of Elmet, 341
- Kingsdale Pot Holes, 312
- Kingston-upon-Hull, 21, 24
- " Evolution of,  
xxxv., 443
- " Humber Rights,  
98
- " Origin of, 420
- Kiplingcotes, 356
- Kippax, 407
- " Borings, Map, 491
- " Colliery, 125, 246
- " Colliery, Coal Cutting, 104
- " Magnesian Limestone, 379
- " Map, 477, 499
- Kirby, 261
- Kirk Deighton, Map, 498
- " Ella, Map, 500
- " Hammerton, Map, 497
- " Levington, Map, 492
- " Smeaton, 178
- Kirkburton, Map, 487, 501
- Kirkby Fleetham, Map, 493
- KIRKBY, J. W., 95, 97, 101, 102, 111,  
113, 135, 140, 159, 184, 190, 191,  
197, 198, 206, 250, 251, 276, 286
- Kirkby Knowle, Map, 494
- Kirkby Lonsdale, 46
- " Memoir, 127
- " Silurians, 111
- " Valleys near, 105
- " Malham, Map, 496
- " Malzeard, Map, 495
- " Map, 493
- " Misperton, Map, 495
- " Moorside, 38, 40, 255, 272, 432,  
468
- " Moorside, Map, 495
- " Stephen, 48, 53, 459, 472
- " Limestone, 231
- " Permians, 81, 85
- " Ravensworth, Map, 492
- " Underdale, Map, 486, 497
- Kirkbya*, 190
- Kirkdale, 37, 38, 39, 40, 41, 44, 49, 50,  
51, 382
- " Bones, 65
- " Cave, 62, 74, 134, 193, 250,  
258, 264, 345, 403, 415
- " Bones, 68
- " Mammals, 64, 69,  
111
- " Hyæna, 345
- " Moor, Map, 494
- " Mustelidæ, 453
- Kirkham Abbey, 222
- " Map, 496
- Kirklevington, Section at, 98
- Kirklington, Boulders, 264, 269, 276  
343
- " Map, 474
- " Water, 168
- Kirkmoorgate Boulders, 338
- Kirkstall, 52
- " Map, 499
- Kirmington, Drift, 395, 404, 432
- " Fossiliferous Drift, 366,  
375, 385, 419
- KIRWAN, R., 25
- Kissingen Water, Harrogate, 193
- KITCHIN, F. L., 402
- Kiveton Park Colliery, 271
- " Park, Map, 487
- Kjøbenhavn*, 174
- Klimaveränderungen, Postglaziale*, 429
- Knaption, Brachiopoda, 81
- " Map, 485
- " Neocomian Clay, 233
- Knaresborough, Knaresburgh, Knares-  
borow, Knaresborrow, Knares-  
borouhum, 1, 2, 3, 4, 5, 6, 7, 8, 9,  
10, 11, 13, 14, 15, 17, 19, 20, 22,  
23, 24, 28, 31, 33, 36, 37, 38, 39,  
40, 43, 49, 50, 55, 56, 58, 59, 60,  
79, 132, 210, 239, 259, 262, 271,  
279, 470, 474
- Knaresborough*, 17, 18, 23, 31, 33, 37,  
39, 50, 65, 66

- Knaresborough, Analysis of Water, 282  
 „ Dropping Well, 292, 457  
 „ Druidical Remains, 57  
 „ Forest, 125, 384  
 „ History of, 65  
 „ Limestone, 66  
 „ Map, 484, 485, 497  
 „ Marls and Limestone, 63  
 „ New Red Series, 322  
 „ Rothliegende Beds, 120  
 „ Sanitation, 402  
 „ Spa, 61, 65  
 KNIPE, J. A., 79  
 Knolls, Craven, 312, 316, 386, 397  
 „ Map of, 397  
 „ Origin of, 397  
 Knottingley, 35  
 „ Limestone, 67  
 „ Map, 477  
 „ Permian Fossils, 116  
*Knowledge*, 382, 396, 445, 449, 452, 474  
 KNOWLES, LEES, 414  
 KNOWLTON, J., 14  
 „ F. H., 206, 208, 216  
 KNOX, R., 81  
 KNUBLEY, E. P., 220, 224  
 'Kohlenfeld sudlichen, Yorkshire,' 149  
*Koloxylon hookeri*, 275  
 KONINCK, L. G. DE, 79, 88, 89, 198, 199, 206, 207  
 KROPF, LEWIS, L., 198, 206  
 KRUSCH, P., 467, 471  
 KUHLOW, W., 145, 149  
  
 L. —, A. D. L., 166, 171  
*L'Institute*, 54  
 Labyrinthodont, Bradford, 118, 121  
 „ Yoredales, 136  
 Labyrinthodonts, Wensleydale, 183  
 Lackenby Foreshore, Boring, 229  
 LACROIX, A., 258  
 Lacustrine Deposits, 336, 364  
 „ „ Diatoms, 105  
 „ „ Filey, 230  
 „ „ Holderness, 111  
 „ „ Hornsea, 394  
 „ „ Skipsea, 263  
 Lafayette Period, 269  
*Lagenostoma lomaxi*, 354  
 „ „ Structure, 364  
 „ „ *physoides*, 354  
 Laister Dyke, 242  
 „ „ Drift, 220  
 Lake Basins, Erosion of, 260  
 „ „ Origin, 145  
 „ „ Bradford Beck, 330  
 „ „ Bed, Northallerton, 450  
  
 Lake Beds, Diatoms, 335  
 „ District, 88  
 „ „ Rocks at Barnsley, 345  
 „ „ Silurians, 111, 129  
 „ Dwelling at Sand-le-Mere, 307  
 „ „ Ulrome, 183, 189, 247  
 „ Dwellings, 177, 201, 223, 234, 246, 384  
 „ „ Pickering, 289, 302, 317  
 „ „ Yorkshire, 186  
 „ Humber, 206  
 „ Like Areas of Depression, 391  
 „ Oxford, 379, 391  
 „ Permian, 381  
 LAKE, PHILIP, 276, 277  
 Lake Pickering, 351, 383  
 „ Wheeldale, 383  
 Lakeland, 301  
 Lakes, Airedale, 379  
 „ Cleveland, 353, 381  
 „ Formation of, 402  
 „ Glacial, 324  
 „ Glacial, Bradford, 367  
 „ Glacier, 349  
 „ „ Cleveland, 362  
 „ „ dammed, 334  
 „ Guide to, 64  
 „ Origin of, 471  
 Lamarck, Classification of Shells, 63  
 Lamellibranchiata, Carboniferous, 284, 295, 305, 312, 314, 321, 323, 332, 334, 342, 361, 371, 412  
 „ „ Catalogue of Oolitic, 376  
 „ „ Cretaceous, 319, 340, 349, 352, 358, 367, 375, 386, 397, 405, 421, 446, 456, 458, 465  
 „ „ Lias, 368  
 „ „ Millstone Grit, 291, 401  
 „ „ Rhætic, 368  
 Lamellibranchs, New, 412  
*Lamna appendiculata*, 446  
 LAMPLUGH, G. W., 154, 159, 164, 169, 175, 179, 182, 184, 185, 198, 206, 213, 216, 224, 225, 232, 233, 234, 238, 240, 241, 243, 251, 252, 262, 277, 286, 287, 296, 306, 326, 335, 353, 363, 364, 372, 381, 382, 392, 414, 418, 429, 432, 440, 452, 457, 461  
 Lamprophyres, 218, 235  
 „ „ Cronkley, 249  
 Lancashire, 446, 447



- Lancashire and Cheshire Naturalist*, 467  
 Lancashire, Glacials, 465, 471  
 " Meteorite, 469  
*Lancashire Naturalist*, 446, 466  
 Lancashire Sandstones, 438  
*Lancaster*, 141, 228  
*Lancet*, 217  
*Land and Water*, 145, 258  
 Land-Ice Theory, 251  
 Land Mollusca, East Yorks., 364  
 " Movements, Halifax, 331  
 " Reclaimed, 179  
 " Reclamation, 320  
 " Shells, Chalk Rubble, 353  
 " " in Drift, 363  
 LONDON, J., 296  
 Landscape in History, 370  
 " History of, 434  
 Landslips, 14, 161  
 " Flamborough, 431  
 " Leeds, 162  
 " Scarborough, 237, 336  
 " Withernsea, 346  
 LANE, GEORGE J., 414, 416, 429, 431, 461, 464, 471  
 Lane Pit, Map, 490  
 LANG, W. D., 393, 461  
 Langcliffe, 226, 254  
 " Boulders, 353  
 LANGDALE, W., 66, 67, 73  
 LANGE, E. F., 402  
 Langsett, Reservoir, 360  
 " Trenches, 386  
 " Waterworks, 318  
 Langstrothdale, 328, 338  
 Langtoft, 363  
 " Cloudburst, 252  
 " Map, 497  
 " Waterspout, 249, 306, 323, 333  
 Langton, Map, 486, 496  
 " Wold, 261  
 LANKESTER, E., 62  
 " E. RAY, 359, 361, 363, 367, 372  
 Lapides Judaici, 6  
 LAPWORTH, C., 304, 306, 309, 315, 345, 393, 459, 461  
 Large Boulders, Flamborough, 237  
 Lartington, Map, 492  
 Lastingham, 402  
 " Map, 494  
 LATCHMORE, J., 191, 193  
 Latest British Volcanoes, 283  
 LATHAM, ERNEST, 471  
*Lathyrus palustris*, Peat, 417  
 LAU, C., 97, 99, 100  
*Lausanne*, 136  
 Laverton, Map, 496  
 LAVIS, H. J. JOHNSTON, 251  
 LAW, ROBERT, 175, 179, 180, 214, 216, 277, 296, 306, 315, 324, 328, 335, 338  
 Layers of Molluscan Shell, 439  
 LE TALL, B. B., 251  
 LEACH, WALTER, 452  
 Lead, 28  
 " Metallurgy, 333  
 " Mines, 178, 333  
 " " Grassington, 67, 193  
 " " Netherdale, 58  
 " Mining, 89, 342, 448, 455  
 " " Yorkshire, 376, 441  
 " " N.W., 140  
 " Ore, 20, 97, 131  
 " Veins, 178  
 " " Allenheads, 100  
 Lealholm Bridge, Map, 492  
 LEAN, W. S., 191  
 LEATHAM, T., 23  
 Leavening, Map, 486  
 Leaves of Calamites, 407, 445, 447  
 LEBOUR, G. A., xxx., 140, 149, 151, 154, 191, 198, 206, 225  
 Leckby Carr, 239, 242  
 LECKENBY, J., 82, 90, 102, 103, 104, 121, 131  
 Leconfield Boulders, 347  
 Lectures on Geology, 81  
 LEE, EDWIN, 51, 53, 61, 71, 80, 90, 100  
 " G. W., 452  
 " J. E., 57, 58  
 " M., 363  
 " W., 63  
 LEECH, D. J., 335, 339  
*Leeds*, 2, 3, 13, 23, 35, 42, 44, 99, 133, 154, 156, 185, 188, 202, 218, 221, 234, 236, 245, 255, 301, 315, 341, 359, 398, 415  
*Leeds*, 9, 10, 32, 34, 41, 47, 51, 81, 177, 253, 272, 273, 280, 293, 303, 308, 313, 407, 442, 468, 469, 470  
 " Alkaline Waters, 90  
 " and Neighbourhood, 415  
 " and Wetherby Railway, Land-slips, 162  
 " Borings, 66  
 " Borings, Map, 490  
 " Boulders, 210, 402  
 " Building Stone, 386  
 " Carboniferous, 120, 232, 242, 249, 320  
 " Clay Pits, 319  
 " Coal, 146, 149, 174, 194, 197, 232, 242, 323, 412  
 " " Boulders, 208, 212  
 " " Cutting, 101, 104  
 " " Measures, 423  
 " " Seams, 89  
 " Coalfield, 204

- Leeds, Coalfield, Extension of, 214  
 „ Drifts, 310, 379  
 „ Earthquake, 199, 240  
 „ Excursions, 78  
 „ Flint Implements, 121  
 „ Fossil Fish, 153  
 „ Geol. Assoc., Index to Transactions, 406  
 „ Geology of, 190, 356  
 „ Glacials, 246, 247  
 „ Handbook, 234, 236  
 „ Hippopotamus, 79, 425  
 „ History of, 104  
 „ *Lit. and Phil. Soc.*, 185  
 „ Mammals, 111, 117  
 „ Map, 479, 484, 489, 490, 491, 499  
 „ *Megalichthys*, 330  
 „ *Mercury*, 191, 229, 230, 231, 233, 235, 236, 249  
 „ Mineral Collection, 185  
 „ Museum, 191, 242, 330, 449  
 „ *Nat. Field Club*, 132  
 „ New Fossil Plant at, 101  
 „ Newspapers, 252  
 „ Permians, 132  
 „ Phil. and Lit. Soc., 104  
 „ Pig-Iron, 89  
 „ Prehistoric, 425  
 „ Quarries, 210  
 „ Recent Deposits, 91  
 „ Sandstones, 197  
 „ Steel Works, 470  
 „ University, 452, 465  
 „ Vegetation, 356  
 „ Water Supply, 170  
 Leeming, Map, 494  
 LEES, F. A., xxxi., 153, 154, 163, 164, 185, 216, 297, 333, 335  
 LEGARD, G., 71  
 Leicester Lit. and Phil. Soc., 357  
 Leicestershire Coalfield, 464  
 LEIGH, C., 8, 9  
 Leighton Buzzard, 316  
*Leipsic*, 7, 20, 95  
*Leisure Hour*, 100, 150, 207, 220, 249  
 LELAND, JOHN, 1, 10, 14, 18  
 Lenticular Hills, Drift, 157  
 Lepidodendra, Aborescent, 279  
 Lepidodendron, Structure, 127, 169  
*Lepidodendron harcourtii*, 396  
 „ *huckii*, 396  
 „ Relationship of, 191  
 „ *selaginoides*, 169, 325  
 „ *selaginoides*, Halifax, 375  
 „ *spenceri*, 307  
 „ Stem and Branches, 375  
 Lepidodendronæ, Parichnos of, 397  
*Lepidophloios*, 258  
 „ *fuliginosus*, 348  
*Lepidostrobus foliaceus*, 383  
 „ Megaspore of, 383  
*Lepidotus gigas*, 54  
 „ *pectinatus*, 75  
 „ *rugosus*, Whitby, 124  
 „ *semiserratus*, 310  
 „ Whitby Lias, 124  
*Lepracanthus*, Coal Measures, 318, 326  
 Leppington, 6  
 „ Map, 486  
*Leptolepis*, Speeton, 380  
 Letchworth, 439  
 Lether Collection, 383, 418  
 Level, Changes of, 265  
*Levellia puzo*, 244  
 LEVERETT, FRANK, 422, 429  
 Levisham, Map, 494  
 LEWIS, A. L., 159, 471  
 „ F. G., 363  
 „ F. J., 393, 402  
 „ HENRY CARVILL, 199, 206, 207, 216, 227, 262, 267, 447  
 „ S., 72  
 Leyburn, 199, 202, 220, 342  
 „ Fish Remains, 183  
 „ Map, 494  
 „ Sanitation of, 390  
*Leyden*, 7, 8, 9  
 LEYLAND, J., 251, 287  
 LHWYD, E., 9  
 Lias, 48, 49, 51, 426  
 „ Ammonites, 55, 64, 88, 97, 103, 172, 181, 201, 267, 274, 458, 475  
 „ Distribution, 127  
 „ Monograph, 156, 160, 166, 177, 187  
 „ *Asteroidea*, 304  
 „ *Avicula contorta*, 94  
 „ Belemnites, 433  
 „ Monograph, 109, 112  
 „ Types of, 423  
 „ Blake on, 127  
 „ Brachiopoda, 75  
 „ Brodie on, 138  
 „ Corals, 128  
 „ Cotteswold and Yorks., 85  
 „ Crinoids, 69  
 „ *Cymbites*, 262  
 „ Dentaliidae, 383  
 „ Diastoporidæ, 171  
 „ *Eryon*, 431  
 „ *Eryon antiquus*, 418  
 „ Filey, 412  
 „ Filey Bay, 82  
 „ Fishes, 75, 246, 300, 310, 319, 454  
 „ Whitby, 290  
 „ Flamborough, 86  
 „ Flora, 365

- Lias, Foraminifera, 124  
 „ Fossil Conifera, 51  
 „ Fossil Fish, 54, 326  
 „ Fossil Sturgeon, 237  
 „ Fossils, 52, 79, 83, 90, 186  
 „ „ Drift, 431  
 „ „ Hornsea, 433  
 „ „ Whitby, 124  
 „ Gaps in, 348  
 „ Gasteropoda, 295, 350  
 „ Insects in, 110  
 „ Ironstone, 94, 102  
 „ Lamellibranchiata, 368  
 „ Lower, 138  
 „ Malton, 169  
 „ Mollusca, 200  
 „ North Sea, 86  
 „ Oolite, Division, 221  
 „ Ophiuroidea, 110, 304  
 „ Ostracoda, 266  
 „ Plesiosaurs, 421, 432  
 „ Redcar, 232  
 „ Reptiles, 99, 185  
 „ Reptilia, 105, 170, 434  
 „ Saurians, 72, 110, 165, 217  
 „ Scaphopoda, 350  
 „ Sections, 248  
 „ Shale, Altered, 341  
 „ *Solaster*, 202  
 „ Starfish, 68, 116, 211  
 „ Teleosaur, 165  
 „ *Trigonia*, 441  
 „ Whitby, 127  
 „ Yorkshire, 146, 300  
 „ „ and Leicester, 110  
 „ Young *Plesiosaurus*, 208  
 „ Zones, Correlation, 156  
 LIDDELL, J., 258  
 Lidgett Colliery, 271  
*Liebig Annal. Chem. Pharm.*, 81  
 Life History of a Mountain, 452  
 'Life of William Smith,' 349  
 Life Zones, Carboniferous, 283, 287,  
 294, 303, 305, 313, 322, 323, 334,  
 344, 352, 361, 371, 380, 391, 392,  
 401  
 Lightcliffe, 101  
 LIGHTFOOT, G. H., 480  
 LIGNIER, C., 414  
 Lille, 142  
 Lily-shaped Animals, 36  
*Lima gaultina*, 367  
 „ *hoperi*, 367  
 „ *longa*, 367  
 „ *parallela*, 367  
 „ *subrigida*, 367  
 Lime and Agriculture, 68  
 Limestone, Analyses, 67, 68, 115, 119  
 „ Building, 127  
 „ Carbonic Acid on, 163  
 „ Cavities, 236  
 Limestone, Cavities, in Craven, 78  
 „ „ Formation, 438  
 „ „ Composition of, 71  
 „ „ Conglomerates, 279  
 „ „ Denudation, 184  
 „ „ Disappearance of, 351  
 „ „ Jointing, 197  
 „ „ Knolls, 312  
 „ „ Knolls, Craven, 316, 386,  
 397  
 „ „ Masses, Ingleborough, 154  
 „ „ Microscopical, 392  
 „ „ Mining of, 359  
 „ „ Shale, Fishes, 346  
 „ „ Shales, Sheffield, 428  
 „ „ Weathering, 231  
 Limits of Coalfields, 274, 381  
 „ „ Ice Sheet, 422  
 „ „ Yoredales, 140  
 Limpet, Fossil, Pickering, 302  
 Lincoln Gap, Story of, 292  
 Lincolnshire, Boulder Clay, 191  
 „ „ Boulders, 289, 311  
 „ „ Coast Boulders, Source,  
 314  
*Lincs. Notes and Queries*, 282, 299  
 Lincolnshire, Speeton Series, 287  
 Lindhead Barn, Glacial Mound, 365  
 Lindholme, Boulders, 210, 212  
 LINDLEY, J., 45, 48, 51, 52, 55  
 Lindsey, 406  
 LINDSEY, C. R., 363, 372  
*Lingula* in Millstone Grit, 218  
 Links with the Past in the Plant World,  
 442  
 LINTON, W. J., 88  
 Lion, Bielsbeck, 365  
 „ „ Hornsea, 365  
 List: British Fossils, 70  
 „ „ British Minerals, 318  
 „ „ Carboniferous Fishes, 397  
 „ „ Diatomaceæ, Hull, 90, 93  
 „ „ Fossils, Carboniferous Limestone,  
 98  
 „ „ Geol. Literature, xxxi.  
 „ „ Millstone Grit Fishes, 358, 366  
 „ „ Mines, 271, 281  
 „ „ Pendleside Fishes, 357  
 „ „ Plans of Abandoned Mines, 291  
 „ „ Plans of Mines, 276  
 „ „ Quarries, 291  
 „ „ Scientific Publications Quoted,  
 ix.  
 „ „ Types of Cephalopoda, 302  
 „ „ York Books, xxxiv.  
 LISTER, J., 191, 193  
 „ „ MARTIN, 5, 6, 7, 8, 9, 35  
 „ „ T., 88  
 Lithistid Sponge, 285  
 Lithium, Harrogate, 107  
 Lthology, 59, 65

- Lithology, Coal Measures, 145  
     " Magnesian Limestone, 475  
     " Millstone Grit, 442  
     " West Yorkshire, 216  
 Lithophylacii Britannici Ichnographia, 9  
 Little Cross Holme, Map, 491  
     " Don Valley, 386, 397  
     " " " Millstone Grit, 329  
     " " " Waterworks, 367  
     " Gomersall Colliery, Map, 489  
 LITTLE, OTWAY, H., 437, 440  
 Little Smeaton, Map, 500  
     " Weighton, 280, 308  
     " Whernside, Map, 495  
 Littleborough, Fish Fauna, 318, 326  
 Littondale, 244, 395  
     " Cave, 377, 388  
     " Past and Present, 255  
 Littoral Drift, 290, 349  
 Live Cockles, 41, 42, 43  
     " Lizard in Coal, 34  
 Liverpool Building Stones, 236  
     " Geological Society, 278  
 Liversedge, Map, 489  
 Lives of Topographers, xxxiii.  
*Local Government Board*, 132, 226, 229  
     " " " *Report*, 152,  
     170, 171, 172, 186, 188, 192, 258,  
     260, 263, 282, 307, 333, 358, 360,  
     370, 372, 375, 382, 390, 393, 397,  
     400, 402, 403  
 Local Museums, 220  
     " Scientific Societies, 383  
 Lockington, Map, 499  
 Lockton Low Moor, Map, 494  
 Lofthouse, Colliery, 271  
     " History of, 176  
 LOFTHOUSE, J., 297  
 Lofthouse, Map, 492, 495  
 LOFTHOUSE, R., 207  
 Loftus, 199, 374, 421  
     " Glacials, 426  
 LOGAN, JAMES, 73  
 LOHEST, M., 198, 199, 206, 207  
 LOMAS, J., 267, 325, 335, 388, 393, 402,  
     414, 452  
     " JOSEPH, Obituary, 414  
 LOMAX, JAMES, 315, 354, 372, 375, 440,  
     452, 471  
 Londesborough, Map, 486, 498  
*London Geol. Journ.*, 68, 69  
     " *Iron Trades Exchange*, 149  
     " *Magazine*, 15  
     " *Review*, 46  
 Long Kin Hole, West, 322  
     " Preston, Map, 497  
     " Riston, Map, 499  
 Longcliffe, 222  
 Longsett, Map, 502  
 Longwall, 125  
 Lonsdale, Gravels, 370  
     " Hermit, 367  
*Lophophyllum*, 459  
 LORD, FREDERICK, 372  
 Loscoe, Boring, Map, 488  
 Loss of Land, 136  
 Lost England, 349  
     " Land, 331  
     " Towns, Holderness, 423  
     " " " Humber, 221  
     " " " Yorkshire, 449, 454  
     " " " " Coast, 457,  
     463, 465  
 LOTHERINGTON, E. B., 429  
 Lothersdale, 189  
     " Fissure, 203  
 Loughshinny, Carboniferous, 403  
 Loughton-en-le Morthen, Map, 502  
 LOUIS, —, 447  
 LOUIS, HENRY, 315, 345, 441  
 Louth, 308  
 LOVEGROVE, E. J., 379, 382  
 LOVEL, J., 252  
 LOVELL, J., 191  
 Loversal, *Bos primigenius*, 389  
 LOVETT, E., 199  
 Low Bradfield, Map, 502  
     " Harrogate, see Harrogate  
 Low, J. S., 382, 393  
 Low Moor, 34, 101  
     " " Coal, 112, 193  
     " " Fish Remains, 318  
     " " Fossil Plants, 224  
     " " Map, 490  
 LOW, R. BRUCE, 175, 258  
     " S., 402  
 LOWE, G. T., 354  
 Lower Carboniferous, Correlation, 313  
     " Carboniferous, Section, 294  
     " Chalk, W. Hill on, 214  
     " " " Memoir, 353  
     " " " Zones, 381  
     " Cretaceous Phosphatic Beds, 372  
     " Cumberworth, Map, 487  
     " Oolites, Gasteropoda, 184  
     " Ouse Valley, Alluvium, 155  
     " Pliocene Period, 177  
     " Wharfedale, 347  
     " Wike, Map, 490  
 LOWRY, J. W., 104, 106  
 Lowthorpe, 229, 230, 242  
     " Map, 497  
 LOZÉ, F., 321, 325  
 LUBBOCK, J., 104, 108, 129, 154, 234,  
     325 (see also under AVEBURY)  
 LUCAS, C., 15  
     " J., 129, 131, 170, 175, 191, 193,  
     222, 225, 478, 479, 480, 483,  
     484, 494, 495, 496, 497, 498,  
     499  
     " W., 67

LUCY, W. C., 135  
 Ludden Foot, Boulders, 259, 278  
 Ludlam Collection of Minerals 374  
 Lumpsey Mines, 176  
 LUND, P., 191  
 Lund Hill, Map, 487  
 Lundhill Colliery, Firedamp, 86  
 Lune, 46  
 " Forest, Map, 480, 491  
 " Moor, Map, 491  
 Lunedale, Perched Block, 185  
 Lunshaw, Water, 157  
 Lupsett Colliery, Map, 488  
 LUPTON, A., 164, 267, 277  
 " M., 100  
 LYCETT, J., 74, 77, 82, 85, 86, 97, 100,  
 129, 136, 140, 150, 160, 170,  
 180  
 Lycopodiaceous Cones, 307  
 Lycopods, Carboniferous, 215, 224  
 LYDEKKER, R., 191, 199, 207, 216, 225,  
 234, 393, 394  
 Lydgate Tunnel, 99  
 LYELL, CHARLES, 47, 50, 51, 55, 56, 57,  
 58, 61, 69, 75, 84, 86, 100, 104,  
 112, 129, 132, 140, 471, 472  
 Lyell, Student's, 286  
 Lyell's Manual, 286  
*Lyginodendron*, 279, 280, 290, 364  
 " Seed of, 354  
 " *oldhamium*, 275  
 Lythe, Map, 492  
 M—, J. T., 228  
 M'COY, F., 71, 72, 82, 83  
 MACDONALD, G., 306  
 MCFARLANE, A., 69, 403  
 MCKAY, G. T., 430  
 MACKENZIE, P., 35  
 MACKIE, S. J., 88  
 MACKINTOSH, —, 118  
 " D., 105, 108, 121, 126,  
 164, 180  
 McMAHON, C. A., 276, 277  
 MACMICHAEL, J. H., 403  
 McMURTRIE, C. E. J., 267  
 MACNAIR, PETER, 429  
 MACPHERSON, J., 118, 126  
 MACQUOID, KATHARINE, 267  
 " THOMAS, 267  
*Macropoma egertoni*, 87  
 Macrospores, Carboniferous, 146  
 " Halifax, 143, 195  
 MACTURK, G. W. B., 335, 354, 382, 425,  
 429, 461  
 MADDISON, R. R., 88  
 MADDOCK, H. E., 277, 306, 345  
 MADISON, J., 199  
 Madreporia, Cretaceous, 318  
 " Oolitic, 180  
 Madrid, 56

*Mag. Nat. Hist.*, 44, 48, 52, 54, 57, 58  
 Magna Britannia, 1, 11  
 Magnesia in Drinking Water, 248  
 " Waters, 114  
 Magnesian Limestone, 25, 39, 41, 43,  
 46, 214, 223,  
 358  
 " " Agriculture, 62  
 " " Analysis, 66  
 " " Cavities, 236,  
 438  
 " " Committee, 379  
 " " for Building, 59,  
 65  
 " " Fossils, 232  
 " " Garforth, 379  
 " " Kippax, 379  
 " " Lithology, 475  
 " " Nodules, 260  
 " " Pontefract, 379  
 " " Ripon, 63  
 " " Weathering of,  
 345  
 Magnetic Declination, Bridlington, 131  
 " Iron, 45  
 " Ironstone, 91  
 " " Rosedale, 121  
 " Permeability of Rocks, 234  
 " Phænomena, Yorkshire, 80  
 " Surveys, 122, 234  
 Maiden Hair Tree, 327  
 Maidstone, 407  
 Maidstone Museum, 407  
 Main Coal, 256  
 Maintenance of Foreshores, 471  
 " Harbours, 290  
 MAIR, L. W. D., 382  
 Makers of British Botany, 462  
 Making of the Earth, 450  
 " East Yorkshire, 374, 384  
*Malacostracous Crustacea*, 99  
 MALCOLM, J. P., xxxiii.  
 MALET, H. P., 258  
 MALEVERER, —, 9  
 Malham, 9, 21, 46, 126, 239, 242, 245,  
 329, 335, 428, 470  
 " Cove, 323  
 " Dry River Bed, 289  
 " Faults, 413  
 " Geology of, 292  
 " Guide, 69, 403  
 " Silurians, 111  
 " Spring, 165  
 " Tarn, 323  
 " Tarn, Map, 495  
 " Underground Streams, 377  
 " Waters, Composition of, 321  
 Mallam Moors, 27  
 Mallerstang, Geology of, 240  
 Maltby, Marine Bands at, 426, 438  
 Malton, 92, 184, 231

- Malton, 4, 6, 14, 17, 51, 201, 235, 328  
 „ *Asteracanthus*, 195  
 „ Boulders, 232  
 „ Coralline Oolite, 71  
 „ Corals, 329  
 „ Excavations, 270  
 „ Field Nat. Soc., 184  
 „ Fossil Reptiles, 63  
 „ Geology of, 169, 184, 190  
 „ *Gyrodus*, 261  
 „ *Hybodus obtusus*, 217  
 „ Limestone, 67  
 „ Map, 479, 481, 486, 496  
 „ *Messenger*, 110  
 „ Meteorology, 282  
 „ Museum, 227  
 „ „ Fossils, 215  
 „ Nat. Soc., 271, 280  
 Malton, Sci. Soc., 195  
 „ *Solenopora*, 262, 264  
 „ Spa, 270  
 „ *Strophodus*, 439  
 „ Water, 231  
 „ Water Supply, 258  
 Mammalia, Catalogue of Fossil, 191  
 „ History of, 310  
 „ Monograph on, 107  
 „ Pleistocene, 153, 345, 382,  
 416, 453  
 „ „ Monograph,  
 117  
 Mammalian Remains, Bridlington, 93,  
 213  
 „ „ Kelsey Hill, 189  
 „ „ Leeds, 79  
 „ „ near Richmond  
 104  
 Mammaliferous Gravels, Elloughton,  
 206, 216  
 Mammals, Bibliography, 307  
 „ British, 436  
 „ Cresswell Crags, 148  
 „ Fossil, 111  
 „ Peat, 307  
 „ Pleistocene, Doncaster, 378  
 „ Remains, Victoria Cave, 129  
 Mammoth Age, 265  
 „ and Drift, 250  
 „ and the Flood, 205  
 „ in Yorkshire, 308  
 „ Tooth, Aldborough, 346  
 „ „ Cayton, 117  
 „ „ Kelsey Hill 443  
 „ „ Robin Hood's Bay,  
 325  
 „ „ Staithes, 323  
 „ „ Withernsea, 368,  
 374  
 „ Tusk, Robin Hood's Bay,  
 408  
 „ „ Withernsea, 442  
 Man, Age of, 203  
 „ Antiquity of, 100, 132, 135, 145,  
 148, 151, 227, 275, 304, 447,  
 471  
 „ and Extinct Animals, 86  
 „ „ Glacial Period, 254, 261, 264,  
 266  
 „ „ Ice Sheets, Relation, 132  
 „ Isle of, 402  
 „ Pleistocene, 425  
 „ Post-Glacial, 268  
 „ Pre-glacial, 144  
 „ Prehistoric, 285, 291, 295, 327  
 „ Remains of, 86  
 MANBY, E. P., 372  
 Manchester, 50, 53, 255, 297, 341, 359,  
 442  
 Manchester, 413, 466  
 „ Fossil Plants, 350  
 Manchester Lit. and Phil. Soc., 110  
 „ Map, 482  
 „ Museum, 220, 255, 284,  
 314, 326  
 „ Water, 475  
 Manfield, Boulders, 220  
 Manganese, 28  
 Manningham, Map, 490  
 „ Park, Fossil Stump, 413  
 Manor Colliery, Map, 488  
 „ of Myton, 236  
 MANSON, D., 118, 150, 160, 170, 185  
 „ R. T., 102, 185, 210, 216, 297,  
 306, 315  
 Manston, Map, 490  
 MANTELL, G. A., 56, 57, 65, 71, 79, 80,  
 85, 86  
 Manual of British Geology, 155  
 „ Geology, 82, 97, 189, 192  
 „ Mineralogy, 450  
 „ Mollusca, 166  
 „ Palæontology, 129  
 „ Petrology, 461  
 „ Tides and Waves, 386  
 Manufacture of Cement, 115  
 „ Peat, 387  
 Manuscript Maps, Smith's, 296  
 Manvers Main, 246  
 Map, 18, 21, 23, 25, 26, 29, 30, 36, 38,  
 39, 45, 50, 105, 146  
 „ Aberford, 499  
 „ Acklam, 486, 496  
 „ Ackton, 483  
 „ Addlecroft, 489  
 „ Adlingfleet, 501  
 „ Ainderly Steeple, 494  
 „ Aire, 484  
 „ Airedale, 498  
 „ Albany, 487  
 „ Aldborough, 492, 499  
 „ Allerston, 495  
 „ „ Low Moor, 494

Map, Allerton, 497  
 „ „ Bywater Boring, 491  
 „ Alne, 496  
 „ Altrincham, 482  
 „ Amotherby, 486  
 „ Ampleforth, 495  
 „ Angram, 492  
 „ Appletreewick, 497  
 „ Arncliffe, 495  
 „ Askern, 501  
 „ „ District, 62  
 „ Askrigg, 479, 494  
 „ Aston, 487  
 „ Attercliffe, 502  
 „ Atwick, 498  
 „ Austhorpe, 484, 491  
 „ Aysgarth, 480, 494  
 „ Ayton, 492  
 „ Bagden, 487  
 „ Baildon, 483, 485  
 „ Bainbridge, 494  
 „ Bainton, 498  
 „ Barden Moor, 497  
 „ Barlow, 482  
 „ Barmston, 497  
 „ Barnard Castle, 480  
 „ Barnoldswick, 498  
 „ Barnsley, 478, 483, 488, 501  
 „ „ Coal, 487, 488  
 „ Barton, 492  
 „ Barton-le-Willows, 486  
 „ Batley Boring, 489  
 „ Baugh Fell, 493  
 „ Bedale, 494  
 „ Beeford, 498  
 „ Beeston Boring, 489, 490  
 „ „ Manor Colliery, 489, 490  
 „ Bentham, 478, 495, 496  
 „ Beverley, 479, 499  
 „ Billy Wood, 491  
 „ Bilsdale, 493  
 „ Bingley, 483, 499  
 „ Birdsall, 486  
 „ Birkdale Common, 492  
 „ Birstal, 500  
 „ Birstall Boring, 489  
 „ Bishopdale, 494  
 „ Bishop Wilton, 486  
 „ Black Hambleton, 482, 485  
 „ Blacker Hill, 488  
 „ Blackstone Edge, 484, 500  
 „ Blacktoft, 500  
 „ Blindstone Moss, 502  
 „ Blocking Coals, 489  
 „ Blubberhouses, 497  
 „ Boltby, 485  
 „ Bolton Percy, 483, 499  
 „ Booth Holme Field Colliery, 490  
 „ Boring, Allerton Bywater, 491  
 „ „ Batley, 489  
 „ „ Beeston, 489, 490

Map, Boring, Birstall, 489  
 „ „ Bradford Moor, 490  
 „ „ Bradgate, 487  
 „ „ Breaks Pit, 490  
 „ „ Bretton, 488  
 „ „ Briery Hall, 488  
 „ „ Carforth Bridge, 491  
 „ „ Carlinghow, 489  
 „ „ Carlton, 487  
 „ „ Cawthorne, 488  
 „ „ Chevet Lane, 488  
 „ „ Cleckheaton, 489  
 „ „ Colton, 491  
 „ „ Curwell, 490  
 „ „ Darton, 488  
 „ „ Denby Grange, 489  
 „ „ Dewsbury, 489  
 „ „ Emley, 488  
 „ „ Fairburn, 491  
 „ „ Gawber Hall, 488  
 „ „ Hallas Field, 488  
 „ „ Heath Common, 488  
 „ „ Heckmondwike, 489  
 „ „ Hostlingley, 489  
 „ „ Kippax, 491  
 „ „ Leeds, 490  
 „ „ Little Gomersall, 489  
 „ „ Loscoe, 488  
 „ „ Micklefield, 491  
 „ „ Mirfield, 489  
 „ „ Ossett, 488  
 „ „ Popplewell, 489  
 „ „ Queenshead, 490  
 „ „ Rawden, 490  
 „ „ Rawmarsh, 487  
 „ „ Royston, 488  
 „ „ Seacroft, 490  
 „ „ Shelf, 490  
 „ „ Simpson's Spring, 489  
 „ „ Snapethorpe, 488  
 „ „ Soothill, 489, 490  
 „ „ Swillington Bridge, 489  
 „ „ Victoria Colliery, 488  
 „ „ Westgate Hill, 490  
 „ „ Wortley, 490  
 „ „ Boroughbridge, 484, 496  
 „ „ Borrowby, 494  
 „ „ Bow Fell, 493  
 „ „ Bowdon, 482  
 „ „ Bowes, 480, 492  
 „ „ Bowes Moor, 492  
 „ „ Bowland, 482  
 „ „ „ Forest, 478, 497  
 „ „ Bowling Iron Works, 490  
 „ „ Bowstead Edge, 501  
 „ „ Bradford, 330, 478, 483, 489, 490, 499  
 „ „ „ Moor, Boring, 490  
 „ „ Bradgate, Boring, 487  
 „ „ Brafferton, 496  
 „ „ Braithwell, 502

- Map, Bramley, 483  
 „ Brandesburton, 499  
 „ Brandsby, 485, 496  
 „ Breaks Pit, Boring, 490  
 „ Bretton, Boring, 488  
 „ Bridlington, 479, 481, 497  
 „ Brighthouse, 487  
 „ Brimham, 484, 496  
 „ British Isles, 286  
 „ Broad-oaks Colliery, 489  
 „ Brodsworth, 501  
 „ Brompton, 495  
 „ Broomhead, 482  
 „ Brotherton, 500  
 „ Brough, 486, 500  
 „ Broughton in Craven, 497  
 „ Bruntcliffe, 489  
 „ Bubwith, 499  
 „ Buckden, 495  
 „ Bugthorpe, 497  
 „ Bulmer, 496  
 „ Burn Moor, 496  
 „ Burnley, 482  
 „ Burton Bank, 487  
 „ Burton in Lonsdale, 480  
 „ Burythorpe, 486  
 „ Bye Pit, 489, 490, 491  
 „ Byram, 483  
 „ Calverley, 483  
 „ Cam Fell, 494  
 „ Campsall, 501  
 „ Carboniferous Grassington, 487  
 „ Carforth Bridge Boring, 491  
 „ Carlinghow Boring, 489  
 „ Carlton, 494, 500  
 „ Carlton, Boring, 487  
 „ Castle Howard, 486, 496  
 „ Castleford, 483, 488, 500  
 „ Castleton, 492  
 „ Catherick, 493  
 „ Catherine Slack, 487  
 „ Catwick, 499  
 „ Cave District, 62  
 „ Cawood, 499  
 „ Cawthorne Boring, 488  
 „ Cayton Bay, 495  
 „ Chalk Zones, 364  
 „ Chapel Allerton, 484, 499  
 „ Charles Pit, 490  
 „ Church Garforth, 499  
 „ „ Lane, 487  
 „ Clapham, 495  
 „ Cleasby, 492  
 „ Cleckheaton Boring, 489  
 „ Cleveland, 94, 353  
 „ Clifton, 489  
 „ Cloughton, 491, 493  
 „ Coal, 277  
 „ „ Barnsley, 487, 488  
 „ „ Haigh Moor, 488  
 „ „ Silkstone, 487
- Map, Coal Strata, 149  
 „ Codbeck, 485  
 „ Collieries, 261  
 „ Colton Boring, 491  
 „ Conisborough, 482, 483, 502  
 „ Conistone Moor, 496  
 „ Copgrove, 496  
 „ Cotherstone, 491  
 „ „ Moor, 480, 492  
 „ Cotterdale, 493  
 „ Cottingham, 500  
 „ Cousin's Pit, 489  
 „ Cowthorpe, 498  
 „ Coxwold, 495  
 „ Crambe, 496  
 „ Cranswick, 498  
 „ Crathorne, 492  
 „ Craven Fault, 485  
 „ Crigglestone Cliff, 488  
 „ Croft, 492  
 „ Cronkley Fell, 491  
 „ „ Scar, 480  
 „ Cropton, 494  
 „ Cross Bank Colliery, 489  
 „ „ Flats, 489  
 „ Crossgates, 490  
 „ Crowle Moor, 501  
 „ Cudworth, 501  
 „ Curwell, Boring, 490  
 „ Dacre Banks, 496  
 „ Dale End, 498  
 „ Dame Pit, 490  
 „ Danby, 485  
 „ „ Dale, 493  
 „ „ Moor, 492  
 „ „ Wiske, 493  
 „ Darfield, 501  
 „ Darley Dale, 482  
 „ Darrington, 500  
 „ Darton, 483, 501  
 „ „ Boring, 488  
 „ Dearne Side, 488  
 „ Deep Car, 293, 502  
 „ Denaby Main, 487  
 „ Denby Grange, Boring, 489  
 „ Denholme, 499  
 „ Dent, 493  
 „ Denton, 498  
 „ Derwent, 482  
 „ Dewsbury, 483, 489, 500  
 „ „ Boring, 489  
 „ Dod Fell, 494  
 „ Doghill Green, 482  
 „ Don, 482  
 „ Doncaster, 478, 481, 483, 501, 502  
 „ Downholme, 493  
 „ Dragon Pit, 490  
 „ Drebley, 497  
 „ Driffield, 479, 481, 497  
 „ Dunnington, 498  
 „ Easby Moor, 485



Map, Easington, 501  
 „ Easingwold, 478, 485, 496  
 „ East Ardsley, 489, 500  
 „ „ Cowton, 493  
 „ „ Gawber, 488  
 „ „ Harlsey, 493  
 „ „ Witton, 494  
 „ Eastby, 497  
 „ Eastrington, 500  
 „ Ebberston, 495  
 „ Ecclesfield, 482, 502  
 „ Egton, 495  
 „ Ellerton, 499  
 „ Elvington, 498  
 „ Emley, Boring, 488  
 „ Emroyd, 489  
 „ Engine Pit, 489  
 „ England, 55, 107, 132  
 „ „ and Wales, 281, 294,  
 304  
 „ Escrick, 498  
 „ Eston, 485  
 „ Europe, 316  
 „ Everingham, 498  
 „ Fairburn Boring, 491  
 „ Falconer Colliery, 488  
 „ Fangfoss, 498  
 „ Featherstone Colliery, 488  
 „ Feliskirk, 494  
 „ Felkirk, 483  
 „ Fenay Bridge, 487  
 „ Fence, 487  
 „ Fenton's, 487  
 „ Ferryhill, 485  
 „ Fewston, 498  
 „ Filey, 479, 481, 491, 495  
 „ Finningley, 502  
 „ Fishlake, 501  
 „ Flamborough, 496  
 „ „ Head, 479, 481, 496  
 „ Flaxton, 486  
 „ Fleece Inn, 490  
 „ Flockton, 489  
 „ Foot Road Pit, 490  
 „ Forest of Bowland, 497, 498  
 „ Fountain Fell, 495  
 „ Four Lane Ends, 489  
 „ Fox Wood, 490  
 „ Foxholes, 496  
 „ Foxup, 495  
 „ Fylingdales Moor, 493  
 „ Ganton, 495  
 „ Garford, 484  
 „ Gargrave, 497  
 „ Garnetts Mill, 490  
 „ Garrow Tree Hill, 487  
 „ Gawber, 487  
 „ Gawber Hall, Boring, 488  
 „ Gibraltar Colliery, 490  
 „ Gildersome, 483, 489  
 „ Gillamoor, 494

Map, Gilling, 495  
 „ Gisburn, 478, 497  
 „ „ Forest, 497  
 „ Glaisdale, 493  
 „ Glass Houghton, 483, 488  
 „ Glodwick, 482  
 „ Goldsborough, 483  
 „ Gomersall, 489  
 „ Goodmanham, 498  
 „ Goole, 500  
 „ Goole Moor, 501  
 „ Grassington, 478, 486, 496  
 „ „ Carboniferous 487  
 „ Great Ings, 487  
 „ „ Mitton, 499  
 „ „ Stainforth, 495  
 „ „ Thirkelby, 495  
 „ Greaves, 487  
 „ Green Farm, 490  
 „ „ Lane Pit, 489  
 „ Greenhow Hill, 485  
 „ Grindleton, 498  
 „ Grinton, 493  
 „ Gristhorpe, 485, 495  
 „ Grosmont, 479, 481, 493  
 „ Guisborough, 480, 492  
 „ Hackness, 50, 485, 494  
 „ Haigh Moor, 489  
 „ „ Moor Coal, 488  
 „ Halifax, 340, 478, 484, 487, 489  
 500  
 „ Hallam Moors, 502  
 „ Hallamshire, 482  
 „ Hallas Field Boring, 488  
 „ Halton Gill, 495  
 „ Hambleton Hills, 485  
 „ Hameldon Hill, 482  
 „ Hampsthwaite, 497  
 „ Handsworth, 502  
 „ Harewood, 498  
 „ Harrogate, 478, 484, 497  
 „ Harthill, 477, 502  
 „ Hartley Bank, 488  
 „ Harwood Dale, 493  
 „ Hatfield Chase, 502  
 „ Havercroft, 484  
 „ Hawes, 479, 494  
 „ Hawnby, 494  
 „ Hawsker Bottoms, 485, 492  
 „ Hazel Grove, 489  
 „ Hazlehead, 487  
 „ Headingley, 499  
 „ Heckmondwike, 500  
 „ „ Boring, 489  
 „ Hedon, 500  
 „ Helmsley, 479, 481, 494  
 „ „ Moor, 494  
 „ Hemingbrough, 500  
 „ Hemsworth, 501  
 „ Heptonstall, 484  
 „ „ Moor, 499

- Map, Hessele, 500  
 „ High Field Pit, 487  
 „ „ Flats, 487  
 „ „ Hoyland, 488  
 „ „ Moor, 485  
 „ Higham Colliery, 488  
 „ Highburton, 487  
 „ Hildenley, 486  
 „ Hinderwell, 492  
 „ Hodder, 482  
 „ Holderness, 59, 481  
 „ Hollym, 500  
 „ Holme on Spalding Moor, 499  
 „ Holmes, 487  
 „ Holmfirth, 501  
 „ Holwich, 491  
 „ Honley, 501  
 „ Hook, 500  
 „ Hool Wood Pit, 491  
 „ Hopton, 489  
 „ Hornsea, 481, 499  
 „ Horsforth, 490  
 „ Horton in Ribblesdale, 495  
 „ Houghton, 482  
 „ Hovingham, 495  
 „ „ Spa, 486  
 „ Howardian Hills, 485, 486  
 „ Howden, 477, 500  
 „ „ Moors, 483, 502  
 „ Howgill, 493  
 „ Hoyland, 483, 487  
 „ Huddersfield, 478, 483, 487, 489, 500  
 „ Huggate, 497  
 „ Hull, 477, 500  
 „ Hunmanby, 495  
 „ Hunslet, 484, 490  
 „ Hunsworth Colliery, 489  
 „ Huntington, 497  
 „ Huttons-Ambo, 486  
 „ Hydrogeological, 174  
 „ Ilkley, 478, 485, 498  
 „ Ingleborough, 369, 495  
 „ Ingleby Greenhow, 493  
 „ Ingleton, 358, 479, 486, 495  
 „ Intake, 487  
 „ Jackey Wood, 489  
 „ Jaggar Park Wood, 490  
 „ Jervaulx Abbey, 494  
 „ Jill Lane, 489  
 „ Keighley, 478, 499  
 „ Kelbrook, 498  
 „ Kepwick, 494  
 „ Kettlewell, 479, 487, 495  
 „ Kidstones, 494  
 „ Kildale, 492  
 „ Kildwick, 498  
 „ Kildwick Percy, 486  
 „ Kilham, 497  
 „ Killingbeck Park, 490  
 „ Kilnsea, 501
- Map, King, F. D., by, 218  
 „ Kippax, 477, 499  
 „ „ Boring, 491  
 „ Kirk Deighton, 498  
 „ „ Ella, 500  
 „ „ Hammerton, 497  
 „ „ Levington, 492  
 „ Kirkburton, 487, 501  
 „ Kirkby, 493  
 „ „ Fleetham, 493  
 „ „ Knowle, 494  
 „ „ Malham, 496  
 „ „ Malzeard, 495  
 „ „ Misperton, 495  
 „ „ Moorside, 495  
 „ „ Ravensworth, 492  
 „ „ Underdale, 486, 497  
 „ Kirkdale Moor, 494  
 „ Kirkham Abbey, 496  
 „ Kirklington, 494  
 „ Kirkstall, 499  
 „ Kiverton Park, 487  
 „ Knapton, 485  
 „ Knaresborough, 484, 485, 497  
 „ Knolls, 397  
 „ Knottingley, 477  
 „ Lakes, 82  
 „ Lancashire Coalfield, 53  
 „ Lane Pit, 490  
 „ Langtoft, 497  
 „ Langton, 486, 496  
 „ Lartington, 492  
 „ Lastingham, 494  
 „ Laverton, 496  
 „ Lealholm Bridge, 492  
 „ Leavening, 486  
 „ Leeds, 479, 484, 489, 490, 491, 499  
 „ „ Borings, 490  
 „ Leeming, 494  
 „ Leppington, 486  
 „ Levisham, 494  
 „ Leyburn, 494  
 „ (Lias), 146  
 „ Little Cross Holme, 491  
 „ „ Gomersall Colliery, 489  
 „ „ Smeaton, 500  
 „ „ Whernside, 495  
 „ Liversedge, 489  
 „ Lockington, 499  
 „ Lockton Low Moor, 494  
 „ Lofthouse, 492, 495  
 „ Londesborough, 486, 498  
 „ Long Preston, 497  
 „ Long Riston, 499  
 „ Longsett, 502  
 „ Loscoe Boring, 488  
 „ Loughton en le Morthen, 502  
 „ Low Bradfield, 502  
 „ Low Moor, 490  
 „ Lower Cumberworth, 487

Map, Lower Wike, 490  
 „ Lowthorpe, 497  
 „ Lund Hill, 487  
 „ Lune Forest, 480, 491  
 „ „ Moor, 491  
 „ Lupsett Colliery, 488  
 „ Lythe, 492  
 „ Malham Tarn, 495  
 „ Malton, 479, 481, 486, 496  
 „ Manchester, 482  
 „ Manningham, 490  
 „ Manor Colliery, 488  
 „ Manston, 490  
 „ Market Weighton, 479, 481, 486,  
 499  
 „ Marsden, 478, 482, 483, 501  
 „ Marske, 493  
 „ Masham, 480, 484, 494  
 „ „ Moor, 495  
 „ Melbecks Moor, 492  
 „ Melsonby, 492  
 „ Merrion Square Mill, 490  
 „ Methley, 491  
 „ Mexborough, 502  
 „ Micklefield Boring, 491  
 „ Mickleton, 484, 491  
 „ Middlesbrough, 166, 480, 491  
 „ Middleton, 490  
 „ „ Colliery, 489  
 „ „ Tyas, 493  
 „ Midhopstones, 502  
 „ Mill Houses, 502  
 „ „ Pit, 490  
 „ Mirfield, 489  
 „ „ Boring, 489  
 „ Moggey Field, 490  
 „ Moor Monkton, 497  
 „ Morecambe Bay, 486  
 „ Morley Main, 489  
 „ Mortimer, J. R., by, 118  
 „ Mount Osborne, 487  
 „ Muffat Lane Pit, 489  
 „ Muker, 479, 493  
 „ Mytholm Bridge, 487  
 „ Naburn, 498  
 „ Nafferton, 497  
 „ Netherton, 488  
 „ Neville Hill Colliery, 489  
 „ New Mill, 487  
 „ „ Sovereign, 487  
 „ Newbald, 486  
 „ Newhall Colliery, 490  
 „ Newlands, 488  
 „ Newmarket Colliery, 490  
 „ Newton, 483  
 „ „ Colliery, 488  
 „ „ Dale, 494  
 „ „ Kyme, 484  
 „ „ on Ouse, 362, 497  
 „ Nidderdale, 495  
 „ Nine Standards, 492

Map, Nodderdale, 496  
 „ Normanby, 492, 495  
 „ North Anston, 502  
 „ „ Burton, 496  
 „ „ Cave, 500  
 „ „ Dalton, 498  
 „ „ Dean, 484  
 „ „ Ferriby, 500  
 „ „ Frodingham, 498  
 „ „ Grimston, 486  
 „ „ Sea, 95, 397  
 „ Northallerton, 479, 481, 485, 493  
 „ Northfield House, 489  
 „ Northowram, 487  
 „ Northwich, 482  
 „ Norwood, 487  
 „ „ Green, 487  
 „ Nostel, 484  
 „ Nunburnholme, 498  
 „ Nunnery, 487  
 „ Nunnington, 495  
 „ Oakenshaw, 483  
 „ Oaks, 487  
 „ Oolites, Howardian, 486  
 „ „ Yorkshire, 491  
 „ Orgreave, 487  
 „ Ormesby, 492  
 „ Osmondthorpe, 484  
 „ Osmotherley, 485  
 „ Ossett, Boring, 488  
 „ Otley, 478, 483, 484, 498  
 „ Oughtibridge, 502  
 „ Pannal, 498  
 „ Parlington Hollins, 484  
 „ Parkside, 490  
 „ Pateley Bridge, 478, 496  
 „ Patrick Brompton, 494  
 „ Patrington, 501  
 „ Peak, 482  
 „ Penistone, 478, 487, 501  
 „ Pickering, 371, 479, 481, 485, 486,  
 495  
 „ „ Moors, 493  
 „ Pickhill, 494  
 „ Pierce Bridge, 492  
 „ Pinder Oaks, 487  
 „ Pitsmoor, 487  
 „ Pocklington, 479, 481, 498  
 „ Pontefract, 477, 483, 500  
 „ Popplewell Boring, 489  
 „ „ Pit, 489  
 „ Poynton Coalfield, 482  
 „ Preston, 500  
 „ Prince of Wales Pit, 489  
 „ Pudsey, 483, 499  
 „ Queen's Head Boring, 490  
 „ Rainborough, 487  
 „ Ramsay's 150, 155  
 „ Ramsgill, 496  
 „ Ravenseat Moor, 492  
 „ Rawden, 490

- Map, Rawden Boring, 490  
 „ Rawmarsh Boring, 487  
 „ Red Lathe, 489  
 „ Redcar, 480, 485, 491  
 „ „ Scars, 492  
 „ Reeth, 492  
 „ Reinshaw Park, 487  
 „ Ribble, 482  
 „ Riccall, 499  
 „ Richmond, 479, 493  
 „ Ripon, 479, 481, 496  
 „ Riponden, 500  
 „ Rishworth, 486  
 „ River Hull, 404  
 „ Robin Hood's Bay, 479, 481, 486,  
 493  
 „ Rockliff, 492  
 „ Romaldkirk, 491  
 „ Roos, 500  
 „ Rosedale, 485  
 „ „ Abbey, 479, 481, 493  
 „ Rotherham, 502  
 „ Rothwell, 500  
 „ „ Haigh, 489  
 „ „ Haigh Colliery, 490  
 „ Roundwood Colliery, 488  
 „ Royal Oak, 487  
 „ Royston, 501  
 „ „ Boring, 488  
 „ Rudby, 492  
 „ Rufforth, 498  
 „ Rumbles Moor, 483  
 „ Runswick, 492  
 „ Rutland Moor, 493  
 „ Saddleworth, 478, 483, 486, 501,  
 502  
 „ St. John's, 488  
 „ „ Colliery, 488  
 „ St. Mark's, 493  
 „ St. Peter's Hill, 490  
 „ Saltburn, 481, 492  
 „ Salthaugh Grange, 501  
 „ Saltmarshe, 500  
 „ Sancton, 486  
 „ Saville Pit, 489  
 „ Sawley, 496  
 „ Saxby, 497  
 „ Scalby, 494  
 „ Scampston, 495  
 „ Scarborough, 179, 479, 481, 494  
 „ Scargill, 492  
 „ Scholes, 489  
 „ Seacroft, 484, 499  
 „ „ Boring, 490  
 „ Seamer, 485, 495  
 „ Seaton Ross, 499  
 „ Sedburgh, 480, 493  
 „ Selby, 479, 482, 483, 500  
 „ Settle, 478, 486, 496  
 „ Settrington, 486  
 „ Sharlston, 483, 484
- Map, Sheffield, 477, 481, 482, 502  
 „ Shelf, Boring, 490  
 „ Sherburn, 495, 499  
 „ Sheriff Hutton, 496  
 „ Shipton, 497  
 „ Shireoaks, 487  
 „ Sholes, 484  
 „ Silkstone Coal, 487, 488  
 „ „ Fall, 487  
 „ Simpson's Spring Boring, 489  
 „ Skeffling, 501  
 „ Skelton, 492, 497  
 „ Skidby, 500  
 „ Skipsea, 498  
 „ Skipton, 92, 478, 483, 486, 497  
 „ Skipwith, 499  
 „ Slack Hills, 487  
 „ Slaidburn, 482, 486, 496, 497  
 „ Sledmere, 497  
 „ Sleight's Moor, 493  
 „ Slingsby, 486, 495  
 „ Snaith, 477, 482, 501  
 „ Snapethorpe, Boring, 488  
 „ Snydale Colliery, 488  
 „ Soothill Boring, 489, 490  
 „ South Anston, 502  
 „ „ Cave, 477, 486  
 „ „ Otterington, 494  
 „ „ Stockton, 492  
 „ Sowden Air Pit, 490  
 „ Sowerby Bridge, 500  
 „ Speeton, 479, 496  
 „ „ Cliff, 495  
 „ Spofforth, 498  
 „ Sproatley, 500  
 „ Spurn Head, 477, 501  
 „ „ Point, 501  
 „ Stainmoor Common, 492  
 „ „ Forest, 492  
 „ Stainton, 492  
 „ Staintondale, 493  
 „ Staithes, 485, 492  
 „ Stamford Bridge, 497  
 „ Stanley Victoria Colliery, 488  
 „ Stillingfleet, 499  
 „ Stillington, 485, 496  
 „ Stittenham, 486  
 „ Stocks in Bowland, 497  
 „ Stockton on the Forest, 497  
 „ Stokesley, 479, 481, 492  
 „ Stonesdale Moor, 492  
 „ Strafford Main, 487  
 „ Strawberry Pit, 489  
 „ Street Pit, 489  
 „ Strensall, 497  
 „ Sunk Island, 501  
 „ Sutton on Derwent, 498  
 „ „ the Forest, 496  
 „ Swaledale, 97, 493  
 „ Swaine, 487  
 „ Swaithe, 487

Map, Swillington Bridge Boring, 489  
 " Swinefleet, 501  
 " Swinton, 478, 486, 502  
 " " Park, 487  
 " Tadcaster, 498  
 " Tees, 485  
 " Teesdale, 154  
 " Terrington, 486  
 " Thirsk, 479, 481, 494  
 " " Area, 90  
 " Thorncliffe, 487  
 " Thorne, 477, 501  
 " Thornton, 490  
 " " in Craven, 478, 498  
 " " Lonsdale, 495  
 " Thorpe Basset, 496  
 " Thryberg Hall, 487  
 " Tickhill, 477, 502  
 " Tinsley Park, 487  
 " Tockwith, 498  
 " Todmorden, 478, 484, 500  
 " Toll Bar, 489  
 " Tom Royd's House, 489  
 " Tong, 490  
 " Topcliffe, 495  
 " Trent Fall, 501  
 " Tunstall, 500  
 " Turnerford, 496  
 " Ughill, 482  
 " Ugthorpe, 492  
 " Ulgill Rigg, 492  
 " Ulrome, 497  
 " Union Foundry, 490  
 " Upleatham, 485  
 " Upper Cow Close Pit, 490  
 " " Helmsley, 497  
 " Upsall, 485  
 " Upton, 482  
 " Urra, 493  
 " Vale of York, 266, 485  
 " Victoria Colliery, 489  
 " " Boring, 488  
 " " Mill, 488  
 " " Pit, 489, 490  
 " Waddington, 498  
 " Wadsley, 502  
 " Wadsworth Moor, 499  
 " Waghen, 499  
 " Wakefield, 477, 483, 488, 500  
 " Wales Common, 502  
 " Walkington, 499  
 " Warter, 498  
 " Water Dale, 486  
 " Waterloo Main Colliery, 490  
 " Wath, 495  
 " Wath-upon-Deerne, 502  
 " Weaverthorpe, 496  
 " Weldrake, 498  
 " Well, 494  
 " Wellhouse Foundry, 490  
 " Welton, 500

Map, Wensleydale, 481, 485  
 " Wentworth, 482  
 " " Colliery, 489  
 " West Ardsley Colliery, 489  
 " " Bowling, 490  
 " " Bretton, 501  
 " " Clayton, 488  
 " " Pit, 489  
 " " Riding Colliery, 488  
 " " Tanfield, 495  
 " " Yorkshire Colliery, 489, 491  
 " Westfield Lamb Bridge, 491  
 " Westgate Hill, 489  
 " " Boring, 490  
 " Westow, 486, 496  
 " Wetherby, 479, 498  
 " Wetwang, 497  
 " Wharfe, 484  
 " Wharfedale, 484, 485  
 " Wharnccliffe, 482  
 " " Silkstone, 487  
 " Wharram le Street, 497  
 " Wheatley Wood Pit, 488  
 " Wheldale Colliery, 488  
 " Whernside, 494  
 " " Moors, 494  
 " Whiston, 502  
 " Whitby, 480, 481, 485, 492  
 " White Lee Colliery, 489  
 " Whitestone Cliff, 485  
 " Whitley, 500  
 " Whitwell, 482  
 " Whitwood Colliery, 488  
 " Whorlton, 485, 493  
 " " Moor, 493  
 " Wickersley, 502  
 " Wike, 490  
 " Wilberfoss, 498  
 " Willerby, 485  
 " Windy Bank, 490  
 " Winestead, 500  
 " Winterhill, 487  
 " Winteringham, 486, 496  
 " Withernsea, 500  
 " Withernwick, 499  
 " Wold Newton, 496  
 " Wombwell Main, 487  
 " Womersley, 500  
 " Woodhead, 502  
 " Woodhouse, 502  
 " Woolley Coal, Co., 488  
 " Wortley, 490, 502  
 " " Boring, 490  
 " Wressle, 500  
 " Wycliffe, 492  
 " Wykeham High Moor, 493  
 " Yarm, 492  
 " Yedingham, 495  
 " York, 478, 481, 498  
 " Yorkshire, 53, 58, 82, 98, 128,  
 167, 322, 333

- Map, Yorkshire, Coalfield, 325, 466  
 " " East, 71, 95, 125, 342  
 " " North, 71, 99  
 " " North-East, 362  
 " " Oolites, 491  
 " " Phillips, 78  
 " " South, 197  
 " " South-East, 391  
 " " West, 70, 216  
 Mappleton, Speeton Clay, 432  
 Maps, 8, 242, 434  
 " Earliest Geological, 305  
 " East Yorkshire, 443  
 " Palæo-Geological, 175  
 " Smith's, 296  
 " Strike, 325  
 Marble, 192  
 MARCOU, J., 86  
 Marfleet, 432  
 MARGERISON, SAMUEL, 393, 403, 414, 441, 443  
 Marine Bands in Coal, 409, 412  
 " " Measures, 437  
 " " Maltby, 426, 438  
 " " Millstone Grit, 434  
 " Bed, Oolites, 147  
 " Beds, Barnsley, 399  
 " " Brodsworth, 399  
 " " in Carboniferous, 149  
 " " in Coal, 375, 399  
 " Boulder Clay, 141  
 " Denudation, Brimham, 105  
 " Erosion, Whitby, 374  
 " Fossils, Barnsley, 409, 425  
 " " Bentley, 425  
 " " Coal, 425  
 " Shells in Boulder Clay, 154  
 " " near Hull, 95  
 MARION, J., 297  
 Markenfield, 54, 60  
 Market Weighton, 223, 321  
 Market Weighton, 210, 220, 417, 469, 473  
 " " Black Flint, 315  
 " " Boulders, 260  
 " " Geology, 200  
 " " Lias, 124  
 " " Magnetic Survey, 234  
 " " Map, 479, 481, 486, 499  
 MARKHAM, C. A., 373  
 " C. R. 160  
 Markings in Chalk, 132  
 Markington, 226  
 " Conglomerate, 254  
 MARLEY, J., 102  
 Marls, Structure of, 78  
 Marlstone, Ammonites, 55  
 " Starfish from, 69  
 Marlstones, Radiaria in, 54  
 MARR, JOHN EDWARD, 145, 175, 207, 216, 217, 218, 234, 243, 245, 252, 274, 277, 283, 287, 306, 312, 315, 325, 330, 354, 373, 410, 414, 426, 430, 438, 441, 461  
 Marrybent, 128  
 Marsden, 24, 331  
 " Flints, 180  
 " Map, 478, 482, 483, 501  
 " Yoredales, 285  
 Marsh Gas, Bradford, 466  
 " Lane, Cuttings, 272, 273  
 MARSH, MARGARET COLLEY, 441  
 MARSHALL, —, 154, 155  
 " J. W. D., 287, 297  
 " W., 22, 27, 34, 41  
 Marshes, Tees, 207  
 Marshland, 343  
 Marske, 471  
 " Dictyozamites, 355  
 " Estuarines, 355  
 " Ferns, 455  
 " Fossil Plants, 414  
 " Map, 493  
 " Oolitic Plants, 429  
 Marston Moor, 260  
 Marsupites, 36  
 MARTEL, —, 270  
 MARTEL, E. A., 277, 287, 297, 415  
*Martesia constricta*, 422  
 MARTIN, EDWARD A., 287, 306, 325, 335, 338, 382, 471  
 MARTINEAU, HARRIET, 81, 82, 88, 89  
 Marton, 421  
 Marton-cum-Grafton, Boulders, 220  
*Marvels of the Universe*, 438  
 Masham, 347  
 " Artesian Well, 150  
 " Boulders, 260  
 " Map, 480, 484, 494  
 " Millstone Grit, 467, 470  
 " Moor Map, 495  
 MASLEN, A. J., 315, 393, 394, 430, 431  
 MASLIN, ARTHUR J., 287, 297  
 Massigen Gesteine, 207, 288  
 Mastodon ? Tooth, 260  
 MATE's Guides, 316  
*Materia Medica*, etc., 335  
 MATHER, W., 102  
 MATLEY, C. A., 401, 403, 405  
*Matonia pectinata*, 317  
 Matoniæ, History of, 317  
 Matrix of Chalky Boulder Clay, 344  
 MATTHEWS, ERNEST R., 373, 382, 415, 430, 452, 461  
 MATTHEWSON, J., 95  
 MAUFE, H. BRANTWOOD, 411, 415, 430  
 (see also MUFF, H.).  
 MAW, G., 114  
 MAY, C., 75  
 MEADE R., 136, 140, 170, 175

- MEADLEY, C., 234  
Meanwood, 427, 469  
    " Ganister, 427  
    " *Sigillaria*, 246  
    " Valley, 210, 255  
    " " Geology of, 305  
    " " Glacials, 247  
Meaux, Boulders, 347  
Mechanico-Chemical Examination of  
    Rocks, 92  
Medals of Creation, 65, 79  
Mediæval Mining and Smelting, 455  
Medical Guide to Harrogate, 70  
*Medical Times and Gazette*, 77  
Medicinal Springs, 128  
    " " Harrogate, 67, 77  
    " " Origin of, 395  
    " " Waters, Harrogate, 102  
*Mediterranean Nat.*, 249  
MEEK, ALEXANDER, 277  
*Megalichthys*, 337  
    " Halifax, 191  
    " *hibberti*, 466, 467  
    " Idle, 185  
    " Leeds, 330  
*Megalosaurus*, 63  
Megaspore of *Lepidostrobus*, 383  
Melbecks Moor, Map, 492  
*Melbourne*, 255  
MELDOLA, R., 199  
MELLO, J. M., 297  
MELLOR, A. L., 430  
*Melonites etheridgii*, 341  
Melsonby, Map, 492  
Melton, 476  
    " Boulders, 270, 276, 279, 289  
*Memoires de la Soc. Spéléologie*,  
    297  
*Memoirs Chem. Soc.*, 65, 66  
    " Cretaceous Rocks, 324, 353,  
    362  
    " *Geol. Survey*, xxix., 68, 70, 71,  
    75, 81, 84, 87, 230, 324,  
    331  
    " *Geol. Survey*, Echinodermata,  
    72, 73  
    " *Manchester Lit. and Phil. Soc.*  
    30, 70, 75, 81, 85  
    " *Palæontographical Soc.*, xxxiv.  
    (see also under *Palæont.*  
    *Soc.*).  
    " and *Proc. Manchester Lit. and*  
    *Phil. Soc.*, 275, 279, 284,  
    295, 326, 348, 350, 360,  
    374, 375, 396, 397, 402,  
    405, 421, 428, 434, 441,  
    451  
    " Sir William Slingsby, 97  
    " *Soc. Geol. Nord.*, 142  
    " *Wernerian Nat. Hist. Soc.*,  
    50  
*Memoirs Wernerian Soc.*, 32, 36, 37, 39,  
    42  
    " York Press, xxxiv  
    " Yorkshire Coalfield, 118  
Memorials of Scarborough, 234  
Men in Settle Cave, 130  
Mendip, 387  
MENNELL, F. P., 461  
Menston, 188  
Mere Gill, 462  
    " " Hole, 416  
Merostomata, 156  
MERRICK, G., 438, 441  
Merrion Square Mill, Map, 490  
MERRYWEATHER, G., 76, 77, 78  
*Mesoxylon*, 431  
Mesozoic Angiosperms, 196  
    " Corals, 329  
    " Flora, 355, 394, 460  
    " Monocotyledon, 223  
    " Plants, 462  
    " " Catalogue of, 326,  
    331, 337, 365,  
    464  
    " Radiata, 71  
Mesozoics, Breaks in, 103  
Metallic Mining, 146  
    " Ores, 405  
Metalliferous Mines Acts, 368  
Metallurgical Literature, Index to,  
    342  
Metallurgie du Fer, 97  
Metallurgy, 207  
    " and Engineering, 441, 447  
    " Early, 333  
    " Elements of, 136, 244  
    " Iron and Steel, 103  
    " Lead, 333  
    " Silver, 333  
    " Steel, 457  
Metals, Output, 303  
Metamorphic Rocks, 197  
Metamorphism, Contact, 276  
METCALF, W. D., 252, 253  
Meteorites, Analyses of, 438  
    " Lancashire, 469  
    " Middlesborough, 174, 204,  
    311  
    " Shepard Collection, 222  
    " Study of, 213  
    " Wold Cottage, 205, 450  
    " Yorkshire, 213, 438  
Meteorology, 130  
Methley, Map, 491  
Mexborough, Map, 502  
MEYER, C. J. A., 118  
*Meyeria ornata*, 99  
MIALI, LOUIS C., 100, 108, 114, 118,  
    119, 121, 126, 129, 132, 136, 154,  
    155, 156, 164, 170, 185, 191, 234,  
    242, 244, 297, 307, 316

- Mica-trap Dykes, 232, 241  
 Mica-traps, Sedbergh, 157  
 Micklefield, 253, 407  
     " Boring, Map, 491  
     " Colliery, 271  
 Mickleton, Map, 491  
 Mickletown, Map, 484  
 Micro-Mineralogical Researches, Chalk, 257  
 Micro-Palæontology, Carboniferous, 187, 193  
*Microcleidus*, 421  
*Microconchus carbonarius*, 75  
 Microscopic Analysis, 202  
     " Animals in Rocks, 69  
     " Chalk, 408  
     " Conditions of Carboniferous Limestone, 156  
     " Examination of Coal, 440, 452  
     " Fossils, 70  
     " " in Bridlington Crag, 89  
     " Structure, Chalk Zones, 276  
     " " Fish Teeth, etc. 72  
     " " Grit, 74  
     " " Marls, 78  
     " " Mountain Limestone, 350  
 Microscopical, Carboniferous Limestones, 392  
     " Examination of Coal, 471  
     " Fossil Plants, 455  
     " Petrology, Birth of, 40  
     " Sections, Red Chalk, 235  
 Microscopy, Chalk, 445  
     " of Flints, 429  
     " Manchester Water, 475  
 Microzoa, Red Chalk, 245  
 Mid-Pennines, Problems of, 455  
 Middle Chalk, Memoir, 353  
     " Gravels, 285  
     " Oolites, 135, 144  
     " Sands, 285  
 MIDDLEMISS, C. S., 179, 180  
 Middlesbrough, 115, 390  
 Middlesbrough, 295, 410  
     " Borings, 101, 102, 158, 338  
     " Borings for Salt, 331  
     " Discovery of Salt at, 102  
     " Earthquake, 191  
     " Geology of, 171, 172  
     " Iron Ore, 75  
     " Map, 166, 480, 491  
     " Meteorite, 174, 204, 311  
     " " Analysis, 438  
 Middlesbrough, Museum, 410  
     " Natural Gas, 237  
     " New Red Sandstone, 102, 396  
     " Prehistoric, 318  
     " Salt, 177, 200, 202, 219, 229, 245, 292, 338  
     " Salt Industry, 237  
     " Water, 148, 168, 240  
     " Well Sections, 300  
     " Wells, 141, 144  
 MIDDLETON, F. E., 373  
 Middleton Colliery, Map, 489  
     " -in-Teesdale, 115, 424, 468, 470  
     " Boulders, 255  
     " Map, 490  
     " on the Wolds, 328  
     " -on-Tees, Perched Block, 185  
     " Tyas, 18  
     " Tyas, Map, 493  
 Middletonite, 57, 153  
 MIDGLEY, W. W., 277, 325, 335  
 Midgley Wood, 296  
 Midhopstones, Map, 502  
 Midland Coalfield, 164, 393  
     " Extension, 283  
     " Glaciers, 304  
     " Glaciology, Bibliography, 275  
     " Institute of Mining, 466  
     " *Naturalist*, 160, 166, 171, 197, 199, 211, 242, 244  
 MIERS, HENRY A., 345, 352, 354  
 Mikroskopische Physiographie der Massigen Gesteine, 288  
 MILBURN, M. M., 71  
 MILES, C. E., 185  
     " GEO., T. J., 441, 442  
 Milford, 224  
 Mill Gill, Carboniferous, 428  
 MILL, H. R., 363, 379, 382  
 Mill Hill, Brough, 327  
     " Gravels, 355  
     " Houses, Map, 502  
     " Pit, Map, 490  
     " Street Works, Halifax, Boring, 366  
*Millepora globularis*, 362  
 Millepore Oolite, Wharram, 274  
 MILLER, —, 244  
     " E., 25  
     " H., 145  
     " J., 36  
     " J. S., 36  
     " ROBERT, 121, 126, 145, 150, 151, 164, 253  
 MILLHOUSE, W., 441  
 MILLS, F. W., 335, 336  
 Millstone Grit, 106, 201, 204, 212, 299, 334, 345, 499  
     " Age of, 67



- Millstone Grit, and Coal, Junction of, 410  
 " " Borings, 356  
 " " Boulder, 251  
 " " Bradford, 358  
 " " Cephalopoda, 291  
 " " Compared, 167  
 " " *Cyrtoceras*, 331  
 " " Deposition of, 278  
 " " Fewston, 434  
 " " Fish Fauna, 331, 339  
 " " Fishes, 133, 346, 357, 366  
 " " Fossil Fish, 318, 330  
 " " Fossils, 313, 318, 391  
 " " Garnets, 52  
 " " Gasteropoda, 291, 401  
 " " Grassington Moor, 351  
 " " Halifax, 122, 137, 356, 366, 405  
 " " Iron Pyrites, in 161  
 " " Lamellibranch, 401  
 " " Lamellibranchiata, 291  
 " " *Lingula*, 218  
 " " Lithology, 442  
 " " Little Don Valley, 329  
 " " Marine Bands in, 434  
 " " Masham, 467, 470  
 " " Memoirs, 118  
 " " Origin of, 90, 161, 165, 450, 460  
 " " Orthoceras, 132, 160  
 " " Otley, 434  
 " " Palæontology, 470  
 " " Plants, 405  
 " " Pule Hill, 291, 331  
 " " Rocks, Calder Valley, 318  
 " " Sequence, 467, 470  
 " " Sheffield, 428  
 " " Silicified Plants, 346  
 " " Sorby on, 165  
 " " Staining of, 130  
 " " Structure of, 90, 213  
 " " Swarth Fell, 336  
 " " Trilobite, 471  
 " " Variation, 144  
 " " Wharfedale, 434  
 " " Whernside, 467, 470  
 " " Yorkshire, South, 110  
 Millwood, Boulders, 277  
 MILNE-EDWARDS, H., 74, 75  
 MILNE, JOHN, 297, 305, 307  
 MILNER, T., 136  
 MILTHERS, V., 415, 449, 461  
 Mineral Collection, Leeds, 185  
 " Conchology, 59  
 " Industry, 322  
 " " Report, 293  
 " " United Kingdom, 310  
 Mineral Kaolinite, 399  
 " Kingdom, 398, 408, 424, 436, 448  
 " Products, 322  
 " Springs, 49, 185  
 " " Analyses, 56  
 " " Analyses, Harrogate 116  
 " " England, 71, 80  
 " " General, 61  
 " " Halifax, 60  
 " " Harrogate, 367, 368  
 " " West Riding, 191  
 " " Yorkshire, 168  
 " Statistics, 81, 92, 145, 159, 164, 169, 182, 271, 281, 291  
 " Topography, 55  
 " Waters, 3, 10, 12, 13, 15, 16, 17, 19, 20, 22, 23, 24, 25, 26, 27, 28, 34, 35, 36, 38, 42, 45, 46, 47, 51, 52, 88, 90, 110, 126, 127, 128, 131, 133, 134, 155, 170, 176, 203, 229, 335, 348  
 " " Analyses, 87, 88, 183  
 " " Askern, 62, 255, 271  
 " " Dictionary of, 92, 173, 211, 247, 255  
 " " Europe, 103  
 " " General, 54  
 " " Halifax, 61  
 " " Harrogate, 59, 60, 62, 63, 64, 67, 71, 79, 80, 81, 85, 107, 119, 121, 122, 136, 138, 180, 182, 183, 189, 193, 251, 253, 258, 259, 268, 290, 309, 310, 317, 397  
 " " History of, 171  
 " " Horley Green, 58  
 " " Leeds, 90  
 " " List of Works on, 222  
 " " Scarborough, 98  
 " " Wealth of Harrogate, 189  
 " " Wells, Harrogate, 188  
 " " Veins, 28, 114, 119, 121, 178  
 " " Brecciation, 437  
 " " Swaledale, 97  
 " " Thrusting in, 312  
 Mineralization of Fossils, 254  
 Mineralogical Collections in British Museum, 363  
*Mineralogical Magazine*, 208, 258, 363, 372, 399, 401, 437, 449  
 Mineralogy, 345, 352, 450  
 " Barnsley, 197, 205  
 " Dana's Manual, 450  
 " Yorkshire Coast, 111

- Mineralproduktion, 145  
 Minerals and the Microscope, 474  
 „ Barnsley, 88  
 „ Coalfield, 149  
 „ Deposits, 467  
 „ Handbook to, 374  
 „ Hull and Barnsley Railway, 181  
 „ Introduction to, 429  
 „ List of, 318  
 „ Non-Metallic, 359  
 „ Output of, 322  
 „ Rosedale Abbey, 180, 186  
 „ Scarborough, 82  
 „ Shown on Map, 29  
 „ Study of, 345  
 „ World's, 444  
 „ Yorkshire, 209  
 „ „ Coalfield, 147  
 Mines, Abandoned, 291, 301  
 „ and Quarries, Statistics, 301, 310, 313, 319  
 „ Carboniferous Limestone, 119  
 „ Grassington, 65, 67  
 „ Inspector's Reports, 73  
 „ Iron, Cliviger, 161  
 „ Lead, 100, 178, 193, 333  
 „ List of, 271, 281  
 „ Lumpsey, 176  
 „ Reports, 75, 76, 79, 81, 83, 84, 87, 89, 91, 94, 97, 98, 101, 104, 106, 110, 113, 116, 120, 123, 127, 130, 133, 138, 142, 147, 152, 156, 161, 166, 172, 177, 188, 194, 201, 209, 220, 227, 238, 246, 255, 261, 291, 415  
 „ Skelton Park, 176  
 „ Statistics, 291  
 Mining, Alum, 466  
 „ and Geology, 420  
 „ and Quarrying, 425  
 „ Atlas, 167  
 „ Coal, 333, 452, 455  
 „ Copper, 455  
 „ Districts, Earth Shakes in, 369  
 „ Industry, Report, 283  
 „ Iron, 455  
 „ Ironstone, 452  
 „ Jet, 176  
 „ *Journal*, 136, 140, 141, 393, 405  
 „ Lead, 89, 140, 342, 376, 448, 455  
 „ „ Yorkshire, 441  
 „ Literature, Index, 332  
 „ *Magazine*, 198  
 „ Mediæval, 455  
 „ Metals, 146  
 „ Mountain Limestone, 116  
 Mining, Non-Metallic Minerals, 359  
 „ Permian, 180  
 „ Reports, 271  
 „ Review, 55  
 „ Rumbolds Moor, 445  
 „ Salt, 466  
 „ Sheffield, 427  
 „ *Smelting Magazine*, 99  
 „ Stone and Ore, 426  
 „ Treatise on, 263  
 Mirfield, 215  
 „ Boring, Map, 489  
 „ Boulders, 272, 276  
 „ Colliery, 246  
 „ Map, 489  
 „ Moor Colliery, 291  
 MITCHELL, C. AINSWORTH, 335, 452  
 „ D. J., 298  
 „ J., 16, 52, 53  
 „ T. CARTER, 210, 217, 234, 242, 244, 259, 415  
 MIVART, F. ST. GEORGE, 382, 403  
 MOBERLEY, —, 72  
 Model of Flamborough Headland, 355  
 „ Ingleborough, 433  
 Modern Petrology, 438  
 Moggey Field, Map, 490  
 Mollusca, 300  
 „ Beverley, 173  
 „ Clapham, 470  
 „ Coal Measures, 385  
 „ Cornbrash, 100  
 „ Crag, 71, 78, 130, 469  
 „ „ Monograph, 137  
 „ East Yorkshire, 364  
 „ Fossil, 177  
 „ Great Mitton, 413  
 „ Hornsea, 263  
 „ Inferior Oolite, 100  
 „ Land and Freshwater, Bibliography, 307  
 „ Lias, 200  
 „ Manual of, 166  
 „ Monograph, 420, 433, 444, 475  
 „ Oolites, Monograph, 77  
 „ Oolitic, 74, 82  
 „ Pliocene, 469  
 „ Scarborough, 411  
 Molluscan Shell, Layers of, 439  
 „ Zones, Carboniferous, 380  
 Monasticon Anglicanum, 4  
 „ Eboracense, 15  
 MONCKMAN, JAMES, 325, 335, 373  
 „ JAMES, Obituary, 376  
 MONCKTON, H. W., 267, 336, 345, 354, 364, 428, 430  
 Monckton Main, Coal, 147  
 „ „ Coal, Insect Remains, 343  
 „ „ Colliery, 238, 301

- Mongolia, 251  
 Monk Bretton Colliery, 246  
 MONKMAN, CHARLES, 114, 119  
 Monoclinial Fold, 427  
 Monograph, Ammonites, 64, 160, 181, 229, 239  
 „ Ammonites, Oolite, 203, 221, 388  
 „ Belemnitidæ, 109, 112, 122  
 „ Brachiopoda, 124, 134, 143, 162, 182  
 „ *Carbonicola*, etc., 265, 275, 284  
 „ Carboniferous Lamelli-branchiata, 284, 295, 305, 312, 314, 321, 323, 332, 334, 342, 361, 371  
 „ Carboniferous Trilobites, 187  
 „ *Conulariæ*, 395  
 „ Corals, 128  
 „ Crag Mollusca, 130, 137, 469  
 „ Cretaceous Lamellibranchiata, 319, 340, 349, 352, 358, 367, 375, 386, 397, 405, 421, 446, 456  
 „ Echinodermata, 96, 103, 110, 123, 127, 137, 156  
 „ Entomostraca, 133, 135, 138, 140  
 „ Estheriæ, 100  
 „ Fauna of Cornbrash, 368, 388  
 „ Foraminifera, 143, 286  
 „ Fossil Echinodermata, 166  
 „ „ Elephants, 147, 157  
 „ „ Reptilia, 93, 95, 100, 119  
 „ „ Sponges, 205, 257  
 „ Gasteropoda, 205, 214, 224, 250  
 „ Gasteropoda, Jurassic, 233, 265, 275, 285  
 „ Graptolites, 459, 469  
 „ Lias Ammonites, 156, 166, 172, 177, 187, 201  
 „ Mollusca, 420, 433, 444, 475  
 Monographs, Palæontographical Society, 71, 73, 74, 75, 76, 77, 78, 81, 82, 85, 87, 89, 91, 94, 95, 96, 99, 100, 101, 103, 105, 107, 108, 109, 110, 112, 113, 117, 119, 122, 123, 124, 127, 128, 129, 130, 133, 134, 135, 136, 137, 138, 140, 143, 147, 150, 153, 156, 157, 160, 162, 166, 167, 170, 172, 177, 180, 181, 182, 184, 187, 201, 203, 205, 208, 214, 215, 221, 224, 229, 233, 239, 250, 257, 265, 275, 284, 285, 286, 295, 305, 314, 315, 319, 321, 323, 334, 338, 340, 345, 349, 352, 358, 362, 367, 368, 371, 375, 383, 386, 388, 395, 396, 397, 405, 416, 420, 422, 445, 446, 453, 456, 459, 465, 469  
 Monograph, Palæozoic Phyllopoda, 305  
 „ Pleistocene Mammalia, 117, 345, 382, 416, 453  
 „ Polyzoa, 236  
 „ Sponges, 214  
 „ *Stigmæria ficoides*, 208  
 „ Trigonæ, 136, 140, 160, 180  
 „ Trilobites, 181  
 Monograptus, 459  
 Monoliths, Boroughbridge, 471  
 „ Rudstone, 171, 244, 246, 471  
*Monotis garforthensis*, 73  
 MONRO, ALEX., 16  
 „ DONALD, 17, 18, 19  
 Monsters, Extinct, 250, 257  
 MONTESSUS DE BALLORE, F. DE, 287  
 Month in Yorkshire, 89  
*Monthly Homœopathic Review*, 259, 268  
 „ *Magazine*, 29  
 Montpellier Water, 109, 112  
 „ Waters, Harrogate, 122  
 „ Saline Water, 105  
 Moor Monckton, Map, 497  
 MOORE, C., 100, 114, 119, 121, „ C. C., 345  
 Moorland Parish, Forty Years in, 291  
 „ Research, 426  
 „ Waters, 311, 331  
 „ „ Acidity, 320, 331  
 Moorlands, Distribution of, 311  
 „ Natural History, 450  
 „ Origin of, 450  
 „ Yorkshire, 362, 370  
 „ „ N.E., 459  
 Moors, Danby, 316  
 „ Halifax, 158  
 „ Origin of, 390  
 „ Peat, 364  
 „ Yorkshire, 186, 201, 307, 316, 446  
 „ „ East, 359  
 Moraines, 422  
 „ Filey, 321  
 „ Terminal, 207, 216  
 „ Vale of York, 324  
 „ York, 270, 286  
 MORANT, A. W., 154  
 Morecambe Bay, Map, 486  
 Moreseat Fossils, 288, 298, 305  
 MORLEY, J., 86, 88, 100, 121, 225, 252  
 Morley Main Colliery, 291  
 „ „ Map, 489  
 „ Sanitation of, 393  
 Morphogenesis of Pelecypoda, 441

- Morphological Index to Williamson's Memoirs, 261  
Morphology of *Stigmara*, 208  
MORRELL, W., 112  
MORRIS, F. O., 150  
,, J., 64, 74, 77, 80, 82, 98, 119, 180  
,, M., 274, 277  
,, M. C. F., 393  
MORRISON, W., 126  
MORTIMER, JOHN ROBERT, 118, 160, 176, 185, 199, 207, 259, 298, 316, 325, 373, 415, 472  
,, JOHN ROBERT, Biography, 443  
,, JOHN ROBERT, Obituary, 440, 443, 452  
Mortimer Museum, 317, 320, 327, 335  
MORTIMER, R., 92, 132, 141, 145, 154, 210, 217, 220, 225  
MORTON, C., 58, 59, 61  
,, G. H., 207, 217, 218  
*Moscow*, 336  
Mosefund, 174  
Moss, C. E., 354, 356, 364, 462  
Mosses, West Yorkshire, 135  
Mother Shipton's Cave, 302  
Motion, Sub-Surface Water, 397  
MOTTRAM, T. H., 472  
Moughton, Cave, 314  
,, Fell, 44, 153  
,, Conglomerate, 216  
Mounds, Cullingworth, 421  
Mount Grace Priory, Shap Granite, 313  
,, Osborne, Map, 487  
Mountain Limestone, 105  
,, ,, see also under  
,, Carboniferous Limestone  
,, ,, Analysis, 129  
,, ,, Bolland, 156  
,, ,, Chiton in, 97  
,, ,, Contortions, 118  
,, ,, Coral Reefs, 207  
,, ,, Corals, 75  
,, ,, Crustacea, 123  
,, ,, Echinoderms 105  
,, ,, Fish, 173, 174  
,, ,, Fossils, 55  
,, ,, Huddersfield 456  
,, ,, Microscopic Structure 350  
,, ,, Mining, 116  
,, ,, Sheffield, 428  
,, ,, Swallow-holes, 121  
,, ,, Vermiform Fossils, 88, 90  
,, ,, Yorkshire, 53  
,, Ranges, Origin, 199  
Mountain Structure, 53  
Mountains, Life History, 452  
*Mourlonia carinata*, 393  
Movements, Beach Material, 314  
,, Rocks, 440  
,, Underground Waters, 322, 332, 343, 351, 360, 378  
Mowbray, History, Vale of, 90  
,, Vale of, 234, 376, 377, 398  
MOYSEY, L., 462, 472  
Mud, Humber, 171, 300  
MUFF, H., 287, 289, 296, 298, 299, 334, 336, see also MAUFE, H.  
,, H. B., 324, 325, 354, 372, 373, 382  
Muffat Lane Pit, Map, 489  
Muker, Map, 479, 493  
Mulgrave Cement, 103  
*Municipal Journal*, 461  
MUNRO, MADELINE, 460  
,, R., 234  
MURCHISON, R. I., 80, 90, 102, 107, 108, 112  
,, R. T., 48, 50  
*Murchisonia* (Carboniferous), 204, 248, 273  
,, *turriculata*, 223  
Murk Esk, 53  
MURLEY, ARTHUR M., 430  
MURRAY, —, 33, 37, 50  
,, J., 31, 34, 95  
,, P., 44, 82  
*Museum Gazette*, 387  
Museums and Societies, Relationships, 383  
,, Association, 463  
,, Bolton, 335  
,, Bradford, 319  
,, Brighouse, 330  
,, British, 216, 225, 227, 231, 234, 241, 274, 284, 293, 300, 302, 311, 313, 326, 337, 340, 345, 363, 365, 367, 384, 387, 398, 436, 461, 464  
,, Cambridge, 445  
,, ,, Botanical, 268, 278  
,, Directory of, 439  
,, Dorman, 410  
,, Driffeld, 317, 320, 325, 327, 335  
,, Glasgow, 429  
,, Hull, xxxv., 91, 291, 346, 347, 365, 374, 383, 403, 404, 417, 418, 443, 454, 462, 463  
,, Jermyn Street, 433  
,, Kendal, 212  
,, Leeds, 191, 242, 330, 449

- Museums, Maidstone, 407  
 „ Malton, 215, 227  
 „ Manchester, 220, 255, 284, 314, 326  
 „ Middlesbrough, 410  
 „ Newcastle, 209, 224, 228, 233, 277  
 „ Northampton, 193  
 „ Oxford, 328, 361  
 „ Practical Geology, 350, 359, 368, 374, 376, 406  
 „ Provincial, 383  
 „ Scarborough, 371  
 „ Sedgwick, 445  
 „ South African, 402  
 „ Whitby, 110, 112, 434, 441  
 „ Woodwardian, 217, 245, 252, 259, 268, 316  
 „ York, 68, 244, 262, 264, 267, 407
- MUSPRATT, J. S., 92, 98, 105, 108, 109, 112, 114, 115, 119  
 „ S., 102
- Mustelidæ, Kirkdale, 453
- MUTER, J., 170
- Myriapods, Grassington, 208  
 „ Spined, 208
- MYRTLE, A. S., 112, 119, 122, 136, 259, 277
- Mytholm Bridge, Map, 487
- Mytholmroyd Boulders, 296, 298, 328, 356  
 „ Drift, 335, 338
- Myton, 98, 259  
 „ Manor of, 236
- N. Journ. Pharm. Aerzt. Apoth. Chem.*, 31
- Naburn, Map, 498
- Nafferton, Map, 497
- Naiadites*, Monograph, 265, 275, 284
- NALL, W., 178, 180
- Names for British Ice Sheets, 332, 335
- Narborough, 272
- NATHORST, A. G., 164, 170, 252
- National Federation of Assistant Teachers, 373
- Natural Aspects of Hull, 373  
 „ Gas, Haverton Hill, 237  
 „ History as a Hobby, 374, 404
- Natural History Journal*, 146, 152, 157, 167, 209, 251, 255, 273, 275, 292
- ‘Natural History of Clay,’ 453  
 „ „ Coal, 435  
 „ „ Craven, 154, 156  
 „ „ Huddersfield, 90  
 „ „ Igneous Rocks, 284, 411  
 „ „ Lofthouse, 176  
 „ „ Moorlands, 450
- Natural History, Report, ‘Terra Nova’ Expedition, 473
- Natural History Transactions North-umberland, Durham, and Newcastle*, 182, 185, 204, 208, 209, 213, 421
- Natural History 200 Years Ago, 473
- Natural Science*, 247, 266, 277, 278, 282, 288, 300, 301, 303, 307, 310, 315, 316
- Naturalist*, xxix., xxx., xxxi., xxxiv., xxxv., 12, 74, 75, 83, 142, 143, 144, 145, 146, 147, 167, 169, 170, 171, 173, 174, 181, 182, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 197, 198, 200, 201, 202, 207, 209, 210, 211, 212, 214, 219, 220, 221, 222, 227, 228, 229, 230, 231, 232, 233, 234, 235, 238, 239, 240, 241, 242, 244, 247, 248, 249, 251, 253, 254, 255, 256, 257, 259, 260, 264, 265, 266, 267, 268, 269, 272, 273, 274, 278, 279, 281, 282, 288, 289, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 311, 312, 313, 314, 315, 316, 317, 318, 320, 321, 323, 324, 325, 327, 328, 329, 333, 334, 335, 336, 337, 338, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 366, 367, 368, 369, 370, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 394, 395, 396, 397, 398, 399, 401, 402, 403, 404, 405, 406, 407, 408, 409, 411, 412, 414, 415, 416, 417, 418, 420, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 435, 436, 437, 439, 440, 441, 442, 443, 444, 445, 447, 448, 449, 450, 451, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 473, 474, 475, 476
- Naturalist's Journal*, 270  
 „ Notes, 270, 273  
 „ World, 183, 187, 188, 191, 200, 201
- Nature*, 121, 124, 129, 130, 131, 132, 146, 161, 165, 178, 188, 191, 199, 205, 206, 207, 211, 217, 218, 225, 235, 243, 252, 254, 265, 272, 274, 282, 286, 287, 296, 304, 307, 312, 314, 315, 318, 320, 321, 322, 325, 326, 327, 330, 331, 334, 339, 341, 408, 422, 423, 431, 434, 438, 440, 442, 443, 445, 446, 447, 449, 455, 457, 458, 460, 461, 462, 464, 469, 473, 475, 476

- Nature Book*, 452  
 'Nature in Hull,' etc., 453  
*Nature Study*, 369  
*Nautical Magazine*, 51  
 Nautili, Jurassic, 231  
 Nautiloid, Carboniferous, 360  
 Nautilus, Fossil, 64  
     " from Coal, 71  
     " *rawsoni*, 65  
     " *tetragonus*, 282  
 Navigation of Tidal Rivers, 260  
 NAYLOR, E., 430  
 NEALE, G., 4, 48  
 NEILL, A., 136  
 Neocomian Clay, Knapton, 233  
     " Speeton, 297  
     " The Term, 198  
     " Judd on, 121  
     " Pavlow on, 336  
 Neolithic Axes, Borrowdale Ash, 442  
     " Remains, Elbolton, 242  
 Neozoics, Correlation, 431  
 Ness, 14  
 Netherdale, History of, 58  
 Netherley, Millstone Grit Fossils, 291  
 Netherton, Map, 488  
 'Netherworld of Mendip,' 387  
 NETTLETON, STANLEY, 430  
*Neu Jahrb. f. Min. Geol. u. Palaeont.*,  
     74, 206, 226  
*Neuchatel*, 51  
 Nevill-holt, 16  
 Neville Hill Colliery, Map, 489  
 NEVIN, J., 234  
 Nevin's Section, 246  
 'New Coalfield, Yorks.', 104  
     " Coalfields, 147, 152  
     " Eastern Coalfields, 426  
     " Lamellibranchs, 412  
     " *Nature Study*, 456  
     " Mill, Map, 487  
     " Oaks Colliery, Fire Damp, 151  
     " " " Gas, 147, 161  
     " *Phytologist*, 354, 358, 365, 367,  
         374, 383, 420, 462, 464  
     " Red Sandstone, 46, 106, 110  
     " " Agriculture, 60  
     " " Cleveland, 122  
     " " Middlesbrough,  
         102, 396  
     " " Relations of, 68  
     " " Water Supply,  
         144, 362  
     " Red Series, Knaresborough, 322  
     " Sovereign, Map, 487  
     " Spa, Harrogate, 115  
     " Trilobite, 466  
     " *York*, 126, 227, 460  
 Newbald, 308  
     " Boulders, 269  
     " Church, 423  
 Newbald, Map, 486  
 NEWBIGGEN, T., 113, 114, 115  
 NEWBITT, T., 441  
     " THOMAS, Obituary, 454  
 Newby, 26, 407  
     " Hall, 33, 54, 56, 58, 60  
 Newcastle, 28, 36  
     " 28, 94, 133, 178, 198, 224,  
         225, 287, 369, 454  
     " *Daily Chronicle*, 224, 225,  
         226  
     " Geology of, 225  
     " Museum, 209, 228, 233, 277  
     " " Fossils, 224  
     " to Cross Fell, Section, 178  
 NEWELL, A., 427  
 Newer Pliocene Period, 166  
 Newhall Colliery, Map, 490  
 Newington Water, 255  
 Newlands, Map, 488  
 Newmarket Colliery, 291  
     " Map, 490  
 Newthorpe, 222, 223  
 Newton, 6, 475  
     " Chambers' Collieries, Gas in,  
         124  
     " Colliery, Map, 488  
     " Dale, Map, 494  
     " Dale, Overflow Channel, 383  
 NEWTON, E. T., 185, 217, 259, 287, 288,  
     298, 299, 336, 393  
 Newton Kyme, 41  
     " Kyme, Map, 484  
     " Map, 483  
     " on Ouse, Map, 497  
     " " Water Supply, 362  
 NEWTON, R. B., 244, 393  
 NICHOL, W., 51, 52  
 NICHOLS, H. B., 316  
     " J. B., xxxiii.  
 NICHOLSON, H. A., 119, 129, 189, 191,  
     216, 217  
     " J., 267, 298  
 Nickel in Cleveland, 102  
 Nidd, 51, 55, 220  
     " Bridge, 210  
     " Celestine Crystals, 217  
     " Tunnel, 209  
     " Valley, Diversion of, 286  
     " Valley, Geology of, 190  
 'Nidderdale,' 104, 194, 265, 268, 398,  
     421  
     " *Cydonocrinus*, 457  
     " Geology of, 263  
     " History of, 99  
     " *Hypocrinus*, 457  
     " Map, 495  
     " Scenery, 384  
     " Upper, 384  
 NIKITIN, S., 225  
 Nine Standards, Map, 492

NIXON, F., 44  
 " J., 45, 47, 53  
 Noblethorpe Boulders, 307  
 Nodderdale, Map, 496  
 Nodular Concretions, Halifax, 354  
 Nodule, Calcareous, Section of, 325  
 Nodules, Coal, 386, 388  
 " Coal, Spores in, 364  
 " Concretionary, 396, 397  
 " Distribution of, 386  
 " Flint, 429  
 " Formation, 386  
 " Magnesian Limestone, 260  
 " Phosphatic, 345  
 " Piethorn Valley, 260  
 " Yoredales, 354  
 Non-Glacial Striæ, 406  
 Non-Metallic Minerals, Mining, 359  
 Nomenclature, Cretaceous, 218  
 " Fossil Crocodile, 193  
 " Palæozoics, 80  
 " Pliocene, etc., 219  
 'Nooks and Corners of Yorks,' 438  
 Norber, 188, 252  
 " Blocks, 159, 168, 197, 210,  
 213, 244  
 " Joints, 197  
 " *Trinucleus*, 453  
 Norfolk, Glacials, 426  
 " Glaciology, Bibliography, 294  
 Norland Clough, 328  
 NORMAN, GEORGE, 90, 93, 105  
 Normanby, Analysis of Iron, 124  
 " Map, 492, 495  
 North America, Ice Age in, 447  
*North and East Yorkshire Science*  
*Notes*, 271, 276, 280, 288  
 North Anston, Map, 502  
 " " Stone, 71  
 " " Magnesian Limestone,  
 345  
*North British Agriculturist*, 186  
 " Burton, Map, 496  
 " Cave, 62  
 " " Map, 500  
 " Cleveland, Geology of, 211  
 " Cliff, 46, 47  
 " " Scarborough, 238  
 " Dalton, Map, 498  
 " Dean, Map, 484  
 North-East Yorks., Geology, 390  
 " " Moorlands, 459  
 " " Water Supply, 390  
 North-Eastern Railway Excursions, 82  
*North England Inst. Min. and Mech.*  
*Eng.*, 342  
 North Ferriby, 308, 407  
 " Boulders, 280, 299  
 " " Map, 500  
 " Frodingham, Map, 498  
 " Gawber Colliery, 291

North Grimston, 281, 346  
 " " Fish, 409  
 " " Map, 486  
 " " Oolites, 201  
 " " Red Chalk, 92  
 " Lancs., 390  
 " Midland Railway, Geology, 61  
 " Otterington, Boulders, 222  
 " Owsram, Coal Plants, 104  
 " Polar Expedition, 327  
 " Riding, Boulders, 210  
 " " Geology of, 371  
 " Sea, 404, 405  
 " " Basin, 414  
 " " Erratics, 177  
 " " Evolution of, 258  
 " " Firths, etc., 95  
 " " Ice Sheet, 265, 304  
 " " Landing, 431  
 " " Map, 397  
 " " Pilot, 133  
 " " Tides, etc., 397  
 " Staffordshire, 375, 380  
 " " Field Club, 300  
 " " Wales, Denudation, 322  
 North-West Yorks., Underground  
 Waters, 321, 343, 351, 369, 370,  
 378  
 'North Yorkshire,' 97, 172, 211, 221,  
 376  
 " " Coalfield, 141  
 Northallerton, Blowing Wells, 161, 168  
 " Boulders, 210  
 " Geology of, 196  
 " Lake Bed, 450  
 " Map, 479, 481, 485, 493  
 " Wells, 174  
 Northampton Museum, 193  
 Northern Coalfield, Extent of, 76  
 " Drift, 70  
 Northfield House, Map, 489  
 Northowram, Map, 487  
 Northumberland, xxx.  
 " " Geology of, 154, 198  
 Northwich, Map, 482  
 Norton Water Supply, 358  
 Norway, Glaciation of, 295  
 Norwegian Boulders, Holderness, 256,  
 257, 304  
 " Boulders, Yorkshire, 265  
 " Ice Sheet, 315  
 " Rocks in Boulder Clay, 264  
*Norwich*, 47, 89  
 " *Geol. Soc. Proc.*, 181  
 Norwood Green, Map, 487  
 " Map, 487  
 NORWOOD, T. W., 88  
 Nostel, Map, 484  
 Nostell Colliery, 261  
*Notes and Queries*, 192, 254  
*Notes on Bibliography*, xxxv.

- Notidanus*, 200, 261  
 Nottinghamshire, 443  
     " Coal, 396, 421  
     " Coalfield, 368, 381,  
         400, 426, 435, 438,  
         440, 460  
     " Concealed Coalfields,  
         372, 456  
*Nouveau Memoires de la Soc. imp. des*  
*Nat. Moscou*, 336  
*Nucleolites clunicularis*, 72  
*Nuculidæ*, Cretaceous, 184  
 Nunburnholme, History of, 393  
     " Map, 498  
 Nunnery Collieries, 261, 300  
     " Map, 487  
 Nunnington, 15  
     " Map, 495  
 Nunthorpe Gravels, 122  
 Nuts, Ancient, 111  
  
 O'REILLY, J. P., 185  
 Oak Beneath Drift, Whorlton, 411  
 Oakenshaw, Map, 483  
 Oaks Colliery, 246  
     " " Dumb Drifts, 87  
     " Map, 487  
*Oberlin*, 447  
 Observations on Alpine Glaciers, 266,  
     276  
 Obsidian, 172  
 Oceanic Denudation, 108  
 Ocellum Promontorium, 37, 38, 40, 50  
 Oil from Shale, 428  
 Old Bingley, 308  
     " " Chronicles, 375  
     " Ingleborough, 367  
     " -Red,' Committee on, 217  
     " River Hull, 420  
     " Sulphur Well, Harrogate, 114  
     " Yorkshire,' 186, 193, 244  
 Oldest Trigonía, 129, 130, 131  
 OLDFIELD, G., 288, 325  
 Oldham, 216, 447  
     " Boulders, 220  
     " C., 133, 136  
     " Coal Concretions, 348  
     " Drift, 227  
     " Geology of, 100  
     " J., 80, 98, 109  
     " Waterworks, 219  
 OLIVER, F. W., 354, 358, 364, 365, 393,  
     462  
     " G., 170, 191  
     " GEORGE, 45  
 Ombriæ, 8  
*Omosaurus phillipsi*, 259  
 Oolites, *Beania*, 117  
     " Blake on, 161  
     " Cave, 62, 190  
     " Classification, 215  
     " Oolites, Cotteswold and Yorks., 85  
     " " Howardian, Map, 486  
     " " Hudleston on, 135, 154  
     " " Lincs. and Yorks., 77  
     " " Malton, 169  
     " " Middle, 144  
     " " North Grimston, 201  
     " " Palæontology, 164, 169, 175,  
         179, 184, 190  
     " " Phillips on, 93  
     " " Scarborough, 64, 102, 282,  
         361  
     " " Sections in, 88, 248  
     " " 'Silicified Boreholes,' in, 455  
     " " Sorby on, 89  
     " " South of Scarborough, 163  
     " " Sub-divisions, 93  
     " " Wharram, 274  
     " " Yorkshire, 298, 312  
     " " " and Gloucestershire,  
         431  
     " " " and Wilts., 95  
     " " " Map, 491  
 Oolitic Ammonites, 97, 203, 229, 388  
     " Belemnites, 109  
     " Brachiopoda, 69, 75, 141, 149,  
         227, 260  
     " Cassidulidæ, 76  
     " Cidaridæ, 74  
     " Coal, 135  
     " Corals, 74, 128, 461  
     " Crustacea, 115  
     " Diastoporida, 171  
     " Echinodermata, 87, 89, 91, 96,  
         101, 110, 156, 166  
     " Ironstone, 84, 94  
     " Flora, 365, 396  
     " Footprints, xxxv., 399, 408,  
         460  
     " Fossils, 262  
     " 'Fruit,' 223  
     " Gasteropoda, 350, 359  
     " Lamellibranchata, Catalogue,  
         376  
     " Marine Bed, 147  
     " Mollusca, 77, 82, 100  
     " " Monograph, 74  
     " Plants, 51, 423, 441, 442, 474  
     " " Marske, 429  
     " " Scarborough, 126  
     " Polyzoa, 461  
     " Rocks, 246  
     " " Correlation, 123  
     " " Direction of, 76  
     " " Yorks., 453  
     " Sandstone, Equisetites, 460  
     " Scaphopoda, 350, 359  
     " Series, Fossils, 56  
     " System, 238  
     " Vegetation, 181  
 Operculum of Ammonite, Whitby, 124



- Ophiopsis leckenbyi*, Scarborough, 166  
     *murrayi*, Staithes, 166  
*Ophiura milleri*, 68, 69  
*Ophiuridae*, 65  
*Ophiuroidea*, 166  
     " Lias, 110, 304  
OPPEL, A., 84  
ORD, J. W., 69  
Ordinance Survey, 40  
     " Maps, 80  
Ore and Stone Mining, 426  
     " Cleveland, 208, 399  
     " Deposits, Treatise on, 186  
     " Supplies, Iron, 388  
Ores, Distribution of, 113, 176  
     " Iron, 114, 123, 131, 141, 198, 258  
     " " Analyses, 84  
     " " History, 224  
     " Lead, 131, 178  
     " Metallic, 405  
     " Rare Elements in, 295  
     " Treatise, 263  
     " Zinc, 131  
Organic Remains, Index of, 426  
     " " Oxford Clay, 62  
Organisation of Brachiopoda, 108  
     " Coal Plants, 127, 156,  
         166, 172, 181, 254  
     " Fossil Plants, 208, 227,  
         236, 260, 269, 279,  
         290  
Orgreave Colliery, 467  
     " Map, 487  
Origin of Arctic Plants, 301  
     " Boulders, 275  
     " British Fauna, 381  
     " " Flora, 316, 381  
     " Building Stones, 450  
     " Cambridge Boulders, 415  
     " Carboniferous Terraces, 148  
     " Caves, 410  
     " Chalk Dales, 199  
     " " Gravel, 185  
     " Chellow Dean, 430  
     " Chert, 205  
     " Chlorine in Waters, 331  
     " Clay Ironstone, 131  
     " Cleveland Ironstone, 86, 384  
     " " Moors, 390  
     " Coal, 193, 332, 392  
     " " -balls, 405  
     " " Concretions, 348  
     " Coums, 139  
     " Gravels around Hull, 307, 317  
     " Gypsum, 395  
     " Humber, Mud, 171, 307  
     " Ironstone, 344  
     " Jet, 117, 337, 346, 384, 404  
     " Kingston-upon-Hull, 420  
     " Knolls, 397  
     " Lake Basins, 145  
Origin of Medicinal Springs, 395  
     " Millstone Grit, 90, 450, 460  
     " Minerals, 467  
     " Moorlands, 450  
     " Mountain Ranges, 199  
     " Pennine Peat Moors, 364  
     " 'Rock Basins,' 110  
     " Rosedale Ironstone, 344  
     " Sandstones, 161  
     " Scenery, 118  
     " Sheffield Flood, 102  
     " Small Pits on Moors, 298  
     " Stratified Rocks, 165  
     " Surface Features, 296  
     " Trias, 377, 388, 393  
     " Valleys, 126, 391  
     " Yorkshire Lakes, 471  
Ormsby, Map, 492  
Ornament of *Trigonia*, 441  
*Orthacanthus*, 162  
*Orthoceras*, Millstone Grit, 132, 160  
*Orthoceras pennatum*, 132  
OSANN, E., 45, 64  
Oscillations in Sea Level, 336  
Osmondthorpe, Map, 484  
Osmotherley, 412  
     " Map, 485  
Ossett, 407  
     " Boring, Map, 488  
Ossiferous Caverns, 304  
Osteology of *Elephas*, 157, 167  
*Ostracanthus dilatatus*, 102  
*Ostracoda*, Carboniferous, 159, 190, 197  
     251, 276, 286  
     " Liassic, 266  
     " Rhætic, 266  
*Ostreidae*, Cretaceous, 465  
OSWALD, S., 185  
Otley, 328, 238, 427  
     " Chevin, 256  
     " Map, 478, 483, 484, 498  
     " Millstone Grit, 434  
Oughtibridge, Map, 502  
Oulton, 252, 253  
     " Park, 117  
Ouse Bridge, 66  
     " Valley, Alluvium, 155  
     " Work of, 316, 317  
Outbursts of Gas, 124, 126  
     " " Barnsley, 161  
     " " New Oaks, 147  
Outfall of Humber, 119  
     " Rivers, 290  
Output of Coal, 301  
     " Metals, 303  
     " Minerals, 322  
OUTRAM, B., 24  
Ovenden Naturalists' Society, 143, 181  
'Overflow Channel,' Newton Dale,  
383  
Overflow Valley, Sugden End, 446

- Oversight K. Vetens Akad. Forhand-  
lingar*, 165
- Overtonia, 475
- 'Overwhelmed Recorder,' 331
- OWEN, R., 59, 61, 63, 64, 69, 90, 93,  
95, 100, 105, 112, 119, 170,  
185, 192
- W., 14, 16, 17
- Owthorne, History of, 87
- Oxford, xxxiii., 9, 10, 14, 100, 149, 199,  
213, 217, 415, 458
- Oxford Clay, Belemnites, 122
- Crustaceans, 195
- Fossils, 56, 62
- in Filey Bay, 82
- Oxford County Histories, 458
- Lake, 379, 391
- Museum, 328, 361
- Oxfordian Gasteropoda, 184
- Oxygen Absorbed by Coal, 476
- Oxyrhina macrorhiza* at Speeton, 327
- mantelli*, 446
- Oysters, Curious Growth, 125
- Pachyodon*, 63
- Paddle of Ichthyosaurus, 263
- PAGE, D., 186, 394
- PAINTER, W. H., 129, 136
- Palæacis humilis*, 285
- 'Palæobotany,' 474
- and Evolution, 298
- Recent Advance in, 284
- Palæo-Geological Maps, 175
- Palæolithic Man, Age of, 146
- Man, Elbolton, 250, 257
- Palæoneilo carbonifera*, 314, 323
- Carboniferous, 314, 321,  
323
- Palæoniscidæ*, 396, 420, 445
- Palæoniscus egertoni*, 73, 75
- Palæontographical Society, 319, *see also*  
*under Monographs, Pal. Soc.*
- Palæontological Breaks, 370
- 'Palæontology,' 93, 95
- East Yorks., 409
- Elementary, 261, 290
- Halifax Hard Bed, 203
- Ingleborough, 392
- Invertebrate, 349, 422
- Malton, 227
- Manual, 129
- Marine Beds in Coal, 375
- Millstone Grit, 334, 470
- Notidanus*, 200
- Oolites, 164, 169, 175,  
179, 190
- Rise of, 287, 297
- Sturgeons, 237
- Text Book of, 465
- Vertebrate, 310
- Yorks., 393, 394
- Palæoxyris*, 462, 472
- in Yorkshire, 296
- Palæozoic Botany, 383
- Crinoides, 88
- Crustaceans, 127
- Echinodermata, 341
- Entomostraca, 108, 190, 197,  
250, 276
- Ferns, 258
- Fossils, 83, 268
- Distribution, 168
- Phyllopoda, 286, 305, 314
- Plants, 198, 243, 307
- Structures, 346
- Structure and Affini-  
ties, 337
- Rocks, Craven, 175
- Ravenstonedale, 75
- Rocks, Water, 153
- Seed-Bearing Plants, 358
- Seeds, 364
- Structure, 394
- Vegetation, 181
- Palæozoics, Cautley, 430, 441, 457, 461
- Classification of, 80
- Nomenclature of, 80
- Sedbergh, 430, 441
- Settle, 207
- 'Paléontologie végétale,' 472
- Palichthyologic Notes, 73
- PALLISER, P., 59
- PALMER, W. E., 415
- Paltoleuroceras elaboratus*, 424
- PANKHURST, E. A., 141
- Pannal, Map, 498
- Panopea gurgitus* 422
- Papers, Corresponding Societies, 435,  
447
- Paraffin from Coal, 449, 452
- Parasite of Stigmarian Rootlets, 366
- Parichnos of Lepidodendron, 397
- Paris, 18, 43, 56, 85, 92, 203, 255, 293,  
297, 325, 472
- PARIS, E. TALBOT, 441, 452, 453
- Paris Basin, 167
- Park, 476
- PARK, GODFREY RICHARD, 277
- Park Mill Colliery, 291
- PARKER, RUPERT, 472
- W. K., 108, 109, 140, 141
- JAMES, 472
- Parkgate Seam, 267
- PARKIN, C., 176, 180, 186
- PARKINSON, J., 25, 38, 364
- T., 210, 217
- Parkside, Map, 490
- Parliamentary Papers, 157, 255
- Parliamentary Reports*, 68, 73, 75, 76,  
79, 81, 83, 87, 89, 91, 94, 97, 98,  
101, 104, 106, 110, 113, 116, 123,  
127, 130, 133, 138, 142, 147,

- 152, 156, 161, 166, 172, 177, 188,  
194, 201, 209, 220, 227, 238, 246,  
255, 261
- Parlington Hollins, Map, 484
- PARRISH, W. S., 267, 298, 325
- PARSONS, E., 430
- "    H. F., 144, 145, 155, 165, 170
- Pateley Bridge*, 95, 99, 104, 125
- Pateley Bridge, 40, 188, 302, 380, 388,  
    401
- "    "    Boulders, 402
- "    "    Carboniferous, 396
- "    "    Caves, 134
- "    "    Flagstones, 75
- "    "    Fossils, 90
- "    "    Map, 222, 478, 496
- Patella rugosa*, 302
- Patrick Brompton, Map, 494
- Pattrington, Map, 501
- PATTINSON, J., 102, 122
- PATTISON, S. R., 115, 207
- PAUL, G., 316, 326, 373
- PAVLOW, A., 225, 251, 252
- "    A. P., 288, 336
- PAWSON, A. H., 288
- PEACOCK, —, 27
- Peacock Coal, Barnsley, 272
- PEACOCK, E. A. WOODRUFFE, 316
- "    J., 26, 45, 46
- "    W. H., 122
- Peak, Ammonites, 229
- "    Map, 482
- PEARCE, HORACE, 244
- PEARSON, H. W., 336
- Pearson's Magazine*, 323
- Peaseholm Excavations, 474
- Peat, 41, 42, 426, 444
- "    Austwick, 125
- "    Beavers in, 355
- "    Beetles in, 350
- "    Bielsbeck, 416
- "    Commercial Uses, 339
- "    Composition of, 460
- "    Deposits, 363
- "    Diatoms in, 90, 93
- "    Ecology, 460
- "    Filey, 230, 239
- "    Flints Beneath, 158, 163
- "    Goole, 308
- "    Holderness, 290
- "    Hornsea, 307, 416
- "    Hull, 125, 135
- "    Kildale, 152
- "    Mammals, 307
- "    Method of Disintegrating, 415
- "    Moors, Pennines, 364
- "    Moss, Cross Fell, 402
- "    Moss Deposits, 398
- "    Pennine Chain, 216
- "    Paper on, 401
- "    Plants, 417
- Peat, Plants, Sequence of, 393
- "    Redcar, 366
- "    Reindeer in, 346
- "    Roos Carr, 174
- "    Seeds, 406, 416
- "    Skull of Duck, 317
- "    Stokesley, 323
- "    Thorne, 389
- "    Underclay, 332
- "    Uses and Manufacture, 387
- "    West Hartlepool, 152
- "    Withernsea, 308, 346
- "    Wrose Brow, 430
- Pebbles in Boulder Clay, 220
- "    Coal, 214
- "    Sand-pipes, 365, 366
- Pebbles, Quartzite, 385
- Pecopteris exilis*, 268
- Pecten cinctus*, 349
- "    *orbicularis*, 349
- "    *striatopunctatus*, 349
- Pectenidae, Monograph, 349
- Pectoral Fin of *Cælacanthus*, 339
- 'Peculiar Phenomena in Yorks,' 82
- Pelecypoda, Morphogenesis of, 441
- PELOURDE, FERNAND, 472
- Pemmatiles constipatus*, 285
- Pendle, 9
- Pendle Hill, 334
- "    "    *Dictyonema*, 352
- "    "    Geology of, 338
- "    "    Graptolites, 392
- Pendleside, 380
- "    Fishes, List of, 357
- "    Fossils, 391
- "    Limestones, Fish Fauna,  
        348
- "    Limestones, Trilobite,  
        Series, *Dictyonema*, 352
- Pendlesides and Yoredales, 439
- "    Position of, 357
- Peneplanation, 475
- Penigent, 48, 53
- Penistone, 248, 318, 386
- "    Diphtheria, 226
- "    Map, 478, 487, 501
- PENN, —, 40
- PENNANT, T., 26
- Pennine Chain, 67
- "    "    Age of, 159, 160, 164,  
        165, 166
- "    "    Ancient Forest, 175
- "    "    Drift, 142
- "    "    Earthquake, 300
- "    "    Elevation, 243
- "    "    Geology of, 94
- "    "    Grits, 213
- "    "    Ice, 207
- "    "    Lead, 342
- "    "    Peat, 216
- "    "    System, 344

- Pennines, 455  
     " Peat Moors, 364  
*Penny Cyclopædia*, 63, 64  
 PENROSE, F., 274, 277  
 Pentacrinites, 6  
*Pentacrinus gracilis*, 69  
 Penton, Carboniferous Gasteropoda, 189  
 PEPLER, G. L., 275, 277  
 'Per Rail,' 456  
*Perca fluviatilis*, 336  
 Perched Block, Lunedale, 185  
     " Blocks, Norber, 197, 244  
 PERCY, J., 103  
 PERFECT, W. G., 226  
 Perforate Coral, 285  
*Peripristis benni*, 343  
*Perisphinctes lacertosus*, 394  
 PERKIN, HERBERT, 452  
 Permians, 80, 81, 85, 101, 148, 165, 190, 211, 215, 232  
     " Analyses, 440  
     " and Trias, Relations, 443  
     " Boulders, Rothwell Haigh, 438  
     " Brachiopoda, 99, 162  
     " Coal, 272  
     " Committee on, 188  
     " Conglomerate, 254  
     " Corals, 75  
     " Currents, 90  
     " Extension of, 102  
     " Foraminifera, 143  
     " Formation of, 128  
     " Fossils, Doncaster, 409  
     " " Knottingley, 116  
     " " Monograph, 73  
     " Hartlepool, 167  
     " Leeds, 132  
     " Limestone, Chemistry, 92  
     " " Composition of, 440  
     " Lucas on, 129  
     " Mining, 180  
     " North-East England, 172  
     " Palæontology, 95  
     " Polyzoa, 227, 236  
     " Ripon, 167, 186, 285  
     " Salt Lake, 381  
     " Sheffield, 428  
     " Sorby on, 89  
     " Staining of, 130  
     " Stalactitic, 285  
     " Subsides, 173  
     " Tadcaster, 120  
     " Unconformability, 153  
     " Water, 144  
     " Wilson on, 146  
     " Yorks., 110  
     " " and Durham, 95  
 Permo-Carboniferous Boundary, 293  
 Perthshire Rocks in East Yorkshire, 346  
 Pervious Rocks, 158  
*Petalorhynchus*, 173  
 PETCH, T., 364, 373, 441  
 Peterborough, 270  
 Petrification, 69  
 Petrified Wood, 55  
 Petrifying Springs, 55  
     " " Knaresborough, 457  
     " Well, 3  
 Petrogenesis, 411  
 Petrological Notes, Boulders, 241  
     " Road Stones, 382  
 Petrology, British, 218  
     " Dykes, 186  
     " for Students, 274, 294, 343, 401  
     " Introduction to, 241, 474  
     " East Yorks., Boulders, 232  
     " Lamprophyres, 218  
     " Manual of, 461  
     " Microscopical, 401  
     " Modern, 438, 450  
     " Sedimentary Rocks, 304, 460  
     " Text Book, 411  
     " Underclays, 468  
     " Yorkshire, 235, 450  
*Pharmaceutical Journal*, 67, 81, 107  
*Philadelphia*, 450  
 PHILIP, R. H., 335, 336  
 Phillips' Dyke, Ingleton, 235, 245  
     " 'Geology of Yorkshire,' 159, 163  
 PHILLIPS, JOHN, xxix., 42, 44, 45, 48, 50, 51, 52, 53, 55, 57, 59, 64, 65, 67, 69, 77, 78, 80, 82, 83, 88, 93, 98, 99, 100, 101, 103, 105, 107, 109, 112, 115, 119, 122, 136, 139, 141, 142, 189, 192, 193, 287, 329, 477  
     " JOHN, Biography, 178, 366  
     " J. A., 136, 170, 186, 207, 244  
     " J. H., 210, 217  
 Phillips' Map, 58, 78  
     " Polyzoa, 187  
 PHILLIPS, R., 40, 67  
     " W., 38, 242, 244  
*Phillipsia cracensis*, 316  
     " *laticaudata*, Bolland, 187  
     " *gemmulifera*, 187  
 PHILLIPSON, G. H., 199  
*Philosophical Magazine*, 25, 28, 29, 30, 31, 32, 33, 35, 37, 39, 41, 42, 43, 44, 45, 46, 47, 49, 50, 51, 52, 53, 57, 65, 66, 67, 91, 109, 146, 225

- Philosophical Transactions*, 5, 6, 7, 8, 9,  
15, 16, 21, 24, 32, 37,  
72, 104, 122, 127,  
131, 156, 166, 171,  
174, 181, 227, 236,  
254, 260, 269, 279,  
290, 307, 317, 364,  
405, 445
- Pholadomya speetonensis*, 422
- Pholidophorus germanicus*, 245
- Phosphatic Beds, Cretaceous, 363
- "    "    Lower Cretaceous, 372
- "    "    Deposits, 329
- "    "    Nodules, 100, 249
- "    "    Analyses, 354
- "    "    in Yoredales, 345
- Phosphatised Carbonate of Lime, 145
- Phosphorus in Cleveland Iron, 155
- "    Ironstone, 150
- Photographs, Bowes, 355
- "    Bridestones, 347, 396
- "    Carboniferous Tree, 246
- "    Carr Naze, 273
- "    Coal Plants, 407
- "    Filey, 303
- "    Forest Bed at Hull, 269
- "    Gaping Ghyll, 411
- "    Geological, 220, 224, 233,  
238, 242, 250, 257, 266,  
276, 290, 300, 302, 309,  
318, 325, 329, 330, 339,  
348, 350, 357, 366, 375,  
384, 419, 421, 432, 445,  
454, 476
- "    Goredale Scar, 158
- "    High Force, 355
- "    Hilderthorpe Cliff, 216
- "    Scalby, 300
- Photographic Supplement to Atlas, 465
- 'Phthisiologia Lancastriensis,' 8
- Phyllocarida, Fossil, 340
- Phyllopoda, Fossil, 206, 215
- "    Palæozoic, 286, 305, 314
- Phyllopodous Crustaceans, 127
- 'Physical Environment in Geology,'  
434
- "    Features of Humber, 80
- "    Geography of East Yorks.,  
109
- "    "    of Yorks., 58, 315
- "    "    Ramsay on, 155
- "    Geology, 268
- "    History of Britain, 175
- "    "    Victoria Cave, 132
- "    Properties of Coal, 232, 242
- "    "    of Ice, 151
- Physics of Shallow Seas, 371
- Physiography of Trias, 223, 226, 229,  
233
- Pickering, 39, 41, 44, 299, 351, 370, 389
- "    Boulders, 292, 299
- "    Delta Deposits, 383
- "    Forest, 371
- "    Fossil Starfish, 69
- "    Glacials, 383
- "    History of, 371
- "    Lake, 351, 383
- "    "    Dwellings, 289, 302,  
317
- "    Map, 479, 481, 485, 486, 495
- "    Moors, Map, 493
- "    Naturalists at, 194
- "    *Patella*, 302
- "    Pre-glacial, 371
- "    Vale, 409
- "    "    Geology of, 325
- PICKERING, —, 453
- "    G. F., 442
- "    W. H., 415, 442
- Pickhill, Map, 494
- PICKLER, W., 139
- PICKWELL, R., 145, 155
- 'Picture of Whitby,' 60
- Piercebridge, 239
- "    "    Boulders, 210
- "    "    Map, 492
- PIERCE, W. G., 277
- Piethorn, 236, 254
- "    Glacials, 269
- "    Valley, Glacials, 260
- Pig Iron, Manufacture of, 89
- PIGGOTT, G. W., 78, 80, 82, 84, 105
- Pile Dwelling, Ulrome, 183
- Pinder Oaks, Map, 487
- PINFOLD, E. S., 430
- Pink Flints, 417
- Pioneers of Yorkshire Geology, 329
- Pits, Allerston Moor, 298
- "    Danby Moor, 94
- "    Ebberston Moor, 298
- "    Goathland Moor, 298
- "    Natural, Ripon, 115
- Pitsmoor, Map, 487
- Place Names, Halifax, 342
- "    Teesdale, 204, 213
- Placoid Fish, 72
- Plain, Severn, 450
- Plan, by W. Smith, 454
- "    of Yorks. Coalfield, 68
- Planorbis fontanus*, Skipsea, 263
- Plans of Abandoned Mines, 276, 281,  
301
- "    Hull, xxxv.
- PLANT, JOHN, 136, 145
- Plant Life in Rocks, 319
- "    Seam Silicified, Swarth Fell,  
336
- "    Strata of Gristhorpe Bay, 106
- Plants, Ancient, 433
- "    and Glacial Period, 442, 453
- "    Coal, 113, 156, 181, 249, 290,  
305, 315, 407, 428, 446

Plants, Coal, Xerophytic Characters, 392  
 „ Evolution of, 346, 442  
 „ Fossil, 300, 442, 473  
 „ „ North Ofram, 104  
 „ „ Scarborough, 126  
 „ Gannister, 389  
 „ Geographical Distribution, 390  
 „ Geological Distribution, 89  
 „ „ History, 213  
 „ Halifax Coral, 157  
 „ Jurassic, 326, 327, 383, 394, 444, 455  
 „ „ Cleveland, 414  
 „ Mesozoic, 462  
 „ „ Catalogue, 326, 331, 337, 365  
 „ Microscopical, 455  
 „ Oolitic, 429, 441, 442, 475  
 „ Palæozoic, 346  
 „ „ Seed-Bearing, 358  
 „ „ Structure and Affinities, 337  
 „ Peat, 417  
 „ „ Sequence of 393  
 „ Scarborough Oolites, 102  
 „ Silicified, Millstone Grit, 346  
 „ Structure of Carboniferous, 389  
 PLATNAUER, H. M., 207, 210, 211, 217, 244, 252, 267, 316, 317, 330, 336, 439, 442  
 PLATT, W. H., 101  
*Platycrinus pileatus*, 252  
*Platypleuroceras aureum*, 431  
 „ *birchoides*, 431  
 PLAYFAIR, H. LYON, 70, 71, 72, 74  
 Pleistocene Deposits, 371  
 „ Fauna, Bielsbeck, 432  
 „ Fishes, 336, 347  
 „ Mammalia, 107, 111, 117, 133, 153, 382, 416, 453  
 „ Mammals, Doncaster, 378  
 „ Man, 425  
 „ Period, 411  
 „ Sheffield, 428  
 „ Shells, Speeton, 432  
 Plesiosaurs, 48, 51  
 „ Distribution of, 171  
 „ Liassic, 421, 432  
*Plesiosaurus*, Development of, 208  
 „ Embryos, Whitby, 288  
 „ *homalospondylus*, 105  
 „ *macrocephalus*, 67  
 „ *macropterus*, 106  
 „ *propinquus*, 434  
 „ *rugosus*, 59  
 „ Whitby, 72, 99  
 „ York Museum, 80  
*Pleuracanthidæ*, 247  
*Pleuracanthus*, 163

*Pleurodus*, 230  
 „ *affinis*, 158  
*Pleuronutilus nodoso-carinatus*, 326  
 „ *pulcher*, 360, 378  
*Pleuroplax*, 230  
 Pliocene Changes, 345, 354  
 „ Mollusca, 469  
 „ Nomenclature, 219  
 „ Period, 166  
 Pliocenes, South-East Yorks., 391  
 Plompton, 210  
 Plumpton, 31, 33, 56, 58, 132, 210  
 „ Cliffs, 126  
 „ Rocks, 13, 162  
 „ Rocks, Age of, 106  
 Pluvial Denudation, 363  
 Pocklington, 188, 268, 273, 374, 419, 442  
 „ Fever at, 263  
 „ Map, 479, 481, 498  
 „ Sanitation, 382  
 'Poissons Fossils,' 51  
 Polar Jurassic Plants, 327  
 POLLARD, W., 345, 354  
 Pollution of Aire, 231  
 Polyzoa, Bibliography, 193, 227  
 „ Carboniferous, 151, 160, 166, 176, 187, 193, 227, 236  
 „ Cornbrash, 260  
 „ Oolites, 461  
 „ Permian, 227, 236  
 „ Red Chalk, 245  
 „ Vine on, 180  
 „ Yoredale, 200  
 Pontefract, 39, 246, 303, 466, 476  
 „ *Bos primigenius*, etc., 122  
 „ Coal Measures, 390  
 „ Geology of, 144, 159  
 „ Magnesian Limestone, 379  
 „ Map, 477, 483, 500  
 „ Water, 153, 248, 263  
 Poolvash, 352  
 Popplewell Boring, Map, 489  
 „ Pit, Map, 489  
 'Popular Geology,' 112  
*Popular Science Review*, 129  
 Population and Geology, 212, 256  
*Porcellia*, 244  
*Porosphæra*, Affinities of, 362  
 „ Structure of, 362  
 Porphyrites, Cheviot, 332  
 Porphyritic Quartz, 249  
 Porphyry, Ingleton, 119  
*Porpoceras verticosum*, 468  
 Portland Cement, 115, 150  
 „ Oolite, Madreporia, 180  
 „ Rocks, 161  
 Portsmouth, 36  
 Portus Felix, 50  
 Position of *Equisetum* Beds, 461  
 „ Pendlesides, 357

Post Carboniferous Earth Movements, 375  
 Post-Glacial Climate, 130  
     " Deposits, 429  
     " Features, 407  
     " " East Yorks. 414  
     " Lake Bed, 394  
     " Mammals, 117, 443  
     " Man, 268  
     " Structure of E. Yorks., 115  
 Post-Glacials, Hornsea, 384  
     " Hull, 302  
*Postglaziale Klimaveränderungen*, 429  
 Post-Permian Fault, Cusworth, 378  
 Post-Pliocene Changes, 286  
 Post-Tertiary Clays, 285  
 'Pot-holes' 187, 355  
     " and Faults, 377, 388  
     " Cause of, 388  
     " Ingleborough, 322, 332, 377, 388  
     " Kingsdale, 312  
     " West Yorks., 296  
     " Yorkshire, 312, 411  
 POULSON, GEORGE, 21, 46, 59, 60  
 POULTON, E. B., 170, 176  
 POWELL, F. W., 415  
 POWER, H., 425, 430  
 Poynton Coalfield, Map, 482  
 Practical Agriculture, 152  
     " Coal-Mining, 388  
     " Geology, Museum of, 350, 359, 368, 374, 376, 406  
 PRATT, A. E., 394  
     " C., 95  
     " C. T., 307, 345, 472  
 Pre-Glacial Beds, 336  
     " Lake Bed, 450  
     " Mammals, 443  
     " Man, 144  
     " Pickering, 371  
     " Shore, 447  
 'Precious Stones,' 400  
 'Prehistoric Europe,' 169  
     " Halifax, 383  
     " Leeds, 425  
     " Man, 295  
     " " and Beast, 285, 291  
     " " Holderness, 327  
     " Implements, Halifax, 451  
     " Middlesbro, 318  
     " Route in Yorks., 437  
     " Times,' 104, 108, 129, 234, 320, 457  
 Preparation of Stone, 400  
     " of Chalk Fossils, 288  
 Pre-Permian Earth Movements, 375  
 Preservation of Chalk Fossils, 363  
 Presidential Address, T. G. Bonney, 202, 422, 423, 436

Presidential Address, T. Britton, 211  
     " " J. Cordeaux, 293, 296  
     " " T. Hicks, 304  
     " " E. J. Garwood, 459, 469  
     " " A. Geikie, 283  
     " " A. Harker, 438, 450  
     " " W. Hewitt, 451  
     " " W. Hill, 439  
     " " W. Hind, 412  
     " " W. H. Hudleston, 257, 265  
     " " P. F. Kendall, 451  
     " " Lees Knowles, 414  
     " " G. W. Lamplugh, 381, 392  
     " " J. E. Marr, 287, 373  
     " " F. W. Oliver, 393  
     " " T. M. Reade, 278, 298  
     " " C. Ricketts, 244  
     " " W. Denison Roe-buck, 472  
     " " W. Rowley, 383  
     " " D. H. Scott, 374, 453  
     " " A. C. Seward, 355, 442  
     " " W. J. Sollas, 418  
     " " A. S. Stevenson, 208  
     " " W. H. Stansfield, 444  
     " " A. Strahan, 375  
     " " J. W. Taylor, 475  
     " " R. H. Tiddeman, 253  
     " " C. B. Travis, 475  
     " " J. Turnbull, 405  
     " " W. Watts, 329  
     " " W. W. Watts, 445  
     " " F. E. Weiss, 455  
     " " A. S. Woodward, 280  
*Preston*, 55  
 Preston Boulders, 300  
     " Map, 500  
 PRESTWICH, J., 95, 107, 109, 199, 217, 277, 310  
 Prevention of Coat Erosion, 418  
 PRICE, A. C., 415  
 'Primitive Man,' 273  
 Prince of Wales' Colliery, 246  
     " " Pit, Map, 489  
 'Principles and Practice of Coal Min-ing,' 385

- PRITCHARD, S. H., 394  
 'Problems of Mid-Pennines,' 455  
 Proboscina, Cornbrash, 260  
*Proc. Amateur Sci. Soc.*, 246  
 „ *American Assoc. Adv. Sci.*, 192,  
 269  
 „ *Ashmolean Soc.*, 65, 68, 82  
 „ *and Rep. Ashmolean N. H. Soc.*,  
 431  
 „ *and Trans. Croydon M. and Nat.*  
*Hist. Club.*, 199  
 „ *and Trans. Liverpool Biological*  
*Soc.*, 345  
 „ *Bath Nat. Hist. Antiq. F. Club*,  
 349  
 „ *Birmingham N. H. and Phil.*  
*Soc.*, 275  
 „ *Birmingham Phil. Soc.*, 173  
 „ *Bristol Nat. Soc.*, 287, 297  
 „ *Cambridge Phil. Soc.*, 109, 144,  
 268, 326, 420, 423, 445  
 „ *Chester Nat. Soc.*, 266  
 „ *Cleveland Inst. Engineers*, 116,  
 117, 121, 150, 151, 161,  
 172, 177, 253, 281, 433  
 „ *Cleveland Nat. Field Club*, 245,  
 279, 290, 318, 331, 338,  
 352, 366, 370, 371, 391,  
 410, 411, 414, 424, 426,  
 429, 459, 460  
 „ *Cotteswold Nat. Field Club.*, 74,  
 97, 103, 113, 123, 135, 332,  
 441, 450  
 „ *Darlington and Teesdale Nat. F.*  
*Club.*, 404, 405  
 „ *Dudley Midland Geol. Soc.*, 100  
*Proceedings Geological Assoc.*, xxxiv.,  
 93, 94, 98, 129, 135, 139, 144, 152,  
 154, 157, 162, 168, 179, 180, 184,  
 185, 224, 237, 238, 243, 263, 266,  
 269, 270, 294, 304, 306, 329, 360,  
 364, 380, 393, 404, 415, 434, 435,  
 439, 440, 451, 461, 469  
*Proc. Geol. Assoc.*, Index to, 435  
 „ *Geological Society*, 43, 44, 46, 48,  
 50, 52, 53, 55, 56, 58, 61,  
 62, 65  
 „ *Hull Junior Field Nat. Soc.*, 430,  
 431  
 „ *Inst. Civ. Eng.*, 66, 95, 97, 98, 99,  
 119, 139, 149, 155, 160, 162,  
 171, 200, 202, 236, 238, 240,  
 290, 302, 316, 369, 373  
 „ *Liverpool Geological Society*, 95,  
 102, 111, 119, 141, 165, 180,  
 207, 244, 252, 259, 284, 288,  
 341, 345, 359, 369, 389, 392,  
 393, 394, 396, 408, 451, 466,  
 475  
 „ *Malacological Society*, 360, 378,  
 393  
*Proc. Manch. Field Club*, 357  
 „ *Manch. Lit. and Phil. Soc.*, 101,  
 107, 108, 110, 121, 124, 130,  
 131, 134, 156, 193, 261, 265,  
 269  
 „ *Mech. Eng.*, 131  
 „ *Midland Inst. Engineers*, 244  
 „ *Norwich Geol. Soc.*, 181  
 „ *Royal Institution*, 77, 181, 264,  
 316  
 „ *Royal Geographical Soc.*, 160  
 „ *Roy. Inst. Brit. Architects*, 66  
 „ *Roy. Phys. Soc.*, Edinburgh, 215,  
 218, 223, 224, 243, 251, 267  
*Proceedings Royal Society*, 104, 175,  
 199, 208, 217, 234, 279, 284, 295,  
 364, 398  
*Proc. Royal Soc.*, Edinburgh, 169, 195  
 „ *Sheffield Nat. Club*, 467  
 „ *Society Antiquaries*, 437  
 „ *Univ. Durham. Phil. Soc.*, 395,  
 441, 450  
*Proceedings, Yorkshire Geological Soci-*  
*ety*, xxix., xxxiii., 58, 59, 60, 61,  
 62, 63, 64, 65, 68, 69, 70, 73, 74, 76,  
 78, 79, 84, 86, 88, 89, 90, 91, 92, 93,  
 96, 97, 101, 107, 111, 113, 114, 115,  
 118, 121, 122, 125, 126, 128, 129,  
 132, 139, 141, 143, 144, 146, 147,  
 148, 149, 150, 151, 152, 153, 155,  
 157, 158, 160, 162, 164, 165, 167,  
 168, 169, 170, 171, 172, 173, 175,  
 176, 177, 178, 179, 180, 182, 183,  
 184, 186, 188, 189, 190, 192, 193,  
 195, 197, 198, 199, 200, 201, 203,  
 204, 205, 206, 207, 208, 211, 212,  
 213, 215, 216, 218, 222, 223, 224,  
 226, 227, 229, 230, 231, 232, 233,  
 234, 235, 236, 240, 241, 243, 245,  
 247, 248, 249, 251, 253, 254, 259,  
 260, 261, 262, 263, 264, 265, 266,  
 268, 270, 271, 272, 273, 276, 277,  
 278, 279, 280, 283, 284, 286, 288,  
 289, 290, 292, 293, 295, 296, 297,  
 298, 299, 300, 302, 303, 304, 305,  
 309, 310, 311, 312, 315, 316, 318,  
 319, 321, 323, 325, 329, 330, 331,  
 332, 334, 335, 336, 338, 339, 340,  
 342, 344, 348, 351, 353, 356, 358,  
 360, 362, 363, 366, 369, 371, 372,  
 377, 378, 379, 380, 381, 383, 386,  
 388, 389, 392, 393, 394, 395, 396,  
 397, 408, 409, 410, 411, 412, 413,  
 414, 416, 421, 424, 425, 426, 427,  
 434, 435, 437, 440, 448, 449, 451,  
 452, 453, 454, 455, 468, 470, 476  
*Proc. Yorks. Nat. Club.*, 116, 117, 120,  
 121, 122, 123, 124  
 „ *Yorks. Phil. Soc.*, 72, 76  
 „ *Zool. Soc.*, 457  
 PROCTOR, W., 103



- Producti*, Carboniferous, 475  
 Progress in Yorks. Geology, 451  
     " of Geology, 315  
*Progressus Rei Botanicae*, 383  
*Prolecanites*, Skipton, 273  
 Proportions of Boulders, 329  
 Protection of Coasts, 349, 382, 452, 461  
     " Land, 155  
     " Foreshores 358  
     " Scarborough Cliff, 240  
     " Shores, 388  
*Protocardia*, 405  
*Protosphyræna ferox*, 309  
 Protozoa, Introduction to, 342  
*Prov. Med. Surg. Journ.*, 67  
 Provincial Museums, 383  
 PRYME, ABRAHAM DE LA, 79  
*Pseudo-spherulites*, 277  
*Pseudodiadema versipora*, 473  
*Pseudolioceras lythense*, 424  
*Pseudomilania vittata*, 413  
*Pterinopecten papyraceus*, 401  
*Pteridophyta*, 403  
 Pterosaurian Skull, Whitby, 217  
*Public Advertiser*, 15  
     " *Health*, 349  
     " *Works*, 367  
 Publications quoted, ix.  
 Pudsey, Map, 483, 499  
 Pule Hill, 24  
     " Fossils, 291, 313  
     " Millstone Grit, 331  
*Pulvinulina caracolla*, 175  
*Punctum pygmius*, 420  
 Purification of Chalk Water, 360  
 Purple Clay, 158  
 PURNELL, T. B., 199  
*Purpura*, 170  
 Purpuroid Shells, 170  
*Purpuroidea* and *Purpura*, 170  
 PUSEY, —, 76, 92  
*Pustula elegans*, 475  
     " *punctata*, 475  
     " *pyridiformis*, 475  
     " *ovalis*, 475  
     " *subelegans*, 475  
     " *venusta*, 475  
*Pustulopora straminea*, 264  
*Pygaster semiculcatus*, 84  
 Pyrites, 7, 29  
     " in Coal Measures, 61  
 Pyritous Concretion, Lias, 288  
 'Pyrologica Mimica,' 5  
 QUAIN, —, 176, 267, 269  
 Quain's *Dictionary of Medicine*, 348  
 Quantitative Methods and Rock Struc-  
     ture, 404  
 Quarries, 281  
     " and Building Stones, 144  
     " Craven, 472  
 Quarries, Disused, 393, 403, 414  
     " Ingleton Granite, 358  
     " Inspection Report, 368  
     " List of, 291  
     " Pickering, 370  
     " Reports, 453, 472  
     " Statistics, 291  
     " Whinstone, 340, 349, 351,  
         353  
*Quart. Journ. Geol. Soc.*, xxxiv., 67, 68,  
     69, 70, 72, 73, 74, 75, 77, 81, 83, 84,  
     85, 88, 90, 93, 94, 95, 96, 97, 98, 99,  
     100, 102, 103, 104, 105, 111, 114,  
     115, 117, 118, 120, 121, 123, 125,  
     128, 129, 130, 131, 132, 136, 137,  
     138, 139, 141, 142, 143, 145, 146,  
     147, 148, 149, 151, 154, 157, 158,  
     159, 160, 161, 162, 163, 164, 165,  
     166, 167, 168, 170, 171, 174, 177,  
     178, 180, 183, 184, 185, 186, 191,  
     195, 196, 200, 204, 205, 207, 208,  
     209, 214, 215, 216, 219, 221, 223,  
     225, 226, 230, 232, 237, 243, 248,  
     253, 254, 257, 265, 266, 267, 272,  
     273, 274, 275, 281, 285, 287, 288,  
     292, 296, 298, 302, 303, 304, 312,  
     314, 315, 323, 328, 334, 336, 343,  
     344, 348, 349, 353, 355, 361, 369,  
     373, 378, 383, 391, 392, 396, 397,  
     403, 404, 409, 414, 415, 418, 424,  
     434, 436, 443, 455, 458, 460, 461,  
     462, 463, 464, 466, 471, 474, 475  
*Quart. Journ. Geol. Soc.*, Index, vol.  
     i.-l., 291  
     " " *Roy. Meteorol. Soc.*, 472  
     " " *Sci.*, 108  
     " " *Sci. Lit. Art.*, 39, 43  
     " *Med. Journ.*, 271  
     " *Trans. Barnsley Nat. Soc.*, 176  
 Quarternary Boulders, 415  
     " Epoch, 269  
     " Gravels, 120  
     " Ice Age, 476  
 Quartz, Porphyritic, 249  
 Quartzite in Coal, 203, 212  
     " Pebbles on Wolds, 365, 366,  
         385  
 Quartzites, North Country, 249  
*Quarry*, 310, 313, 319, 322, 331, 333,  
     340, 343, 349, 350, 351, 353, 358,  
     359, 367, 368, 386, 400, 411, 435,  
     442, 447, 453, 465, 466, 472  
 Quarry, Robin Hood, 468  
 Quarrying, Alum, 453  
     " Salt, 453  
     " Stone, 400, 411  
     " and Mining, 425  
     " in Craven, 466  
     " in Yorkshire, 455  
 Queen's Head Boring, Map, 490  
*Queensland Govt. Mining Journ.*, 398

- Quenstedtia*, 85  
 Querns, 395  
 Questions in East Yorkshire Geology, 306  
 Quicksands, Boring through, 98  
*Rachiopteris cylindrica*, 284, 295  
     "    *laccati*, 325  
     "    *oldhamia*, 374  
*Radiaria*, New, 54  
 Radiata, New Mesozoic, 71  
 Radiolaria, Chalk, 275, 451  
     "    in Rocks, 451  
 Radiolarians, Carboniferous, 166  
*Radiolodites*, Cretaceous, 465  
 'Rain and Rivers, Work of,' 448  
 Rainborough, Map, 487  
 Rainfall and Chlorine, 340  
     "    of East Yorks., 379  
 Rainsborough Scar, 6  
 Raised Beach, Hessle, 378  
     "    "    Redcar, 186  
     "    Beaches, 265  
 Ramage, H., 284, 288, 294, 295, 298  
 Ramsay, —, 123, 126  
     "    ANDREW, 132  
     "    ALEXANDER, 462  
     "    A. C., 103, 129, 150, 152, 154, 155, 268  
 Ramsgill, Map, 496  
 Rankin, W. Munn, 354, 356  
 Ransome, T., 70, 71  
 Rare Elements in Ores, 295  
 Raskelf, Borings, 267  
 Rastall, R. H., 373, 394, 415, 416, 460, 462, 471, 472  
 Rate of Accumulation of Stalagmite, 134  
 Ravenseat Moor, Map, 492  
 Ravenser, 466, 470  
     "    Site of, 359  
 Ravenspurn, 37, 40  
 Ravenstonedale, Palæozoics, 75  
 Ravn, J. P. J., 453  
 Rawcliffe, Water, 196  
 Rawden, Boring, Map, 490  
     "    Map, 490  
 Rawlinson, —, 102, 103  
     "    R., xxxiii.  
 Rawmarsh Boring, Map, 487  
*Raxella*, Chert, 393  
     "    *perforata*, 232  
 Ray, John, 6, 8  
 Raygill Fissure, 164, 168, 173, 183, 189, 203  
 Rea Valley, Gravels, 296  
 Read, C. H., 345  
     "    E. W., 226  
 Reade, T. Melland, 141, 180, 199, 226, 229, 234, 244, 259, 278, 288  
 Readycon Dean, Section, 181  
*Rec. Gen. Sci.*, 54  
 'Recent Changes of Level,' 269  
 Recent Deposits, Airedale, 426  
     "    Flora of Britain, 217  
 Recherches du Terrain Crétacé, 142  
     "    sur le Terrain Crétacé, 219  
 Reclamation of Land, 56, 98, 179, 320, 387  
     "    "    Holderness, 109  
 'Record of Excursions,' 242  
 'Recorder,' 423, 430  
 Recording Coal Plants, 377  
*Records of the Past*, 341, 465, 471  
 Recent Earthquakes, 191  
     "    Rocks, Committee on, 194  
 Red Beds, Sedbergh, 143  
     "    Chalk, 91, 96, 100, 103, 120, 133, 181, 324  
     "    "    Analysis, 101  
     "    "    Cole on, 157  
     "    "    Foraminifera, 92, 212, 229, 342  
     "    "    Fossils, 187  
     "    "    Microscopical, 235  
     "    "    Microzoa, 245  
     "    "    North Grimston, 92  
     "    "    Phillips on, 93  
     "    "    Polyzoa, 245  
     "    "    Speeton, 118, 229  
     "    Deer Antlers, 307, 308  
     "    "    at Goole, 308  
     "    "    at Skipsea, 228  
     "    "    at Withernsea, 308  
     "    "    378, *see also Cervus elaphus*  
     "    Lathe, Map 489  
     "    Marls, Ripon, 63  
     "    Rocks, Classification, 232  
     "    "    Formation, 171  
 Redcar, 51, 183, 289, 293, 380  
     "    Boulders, 280, 293  
     "    Geology of, 238  
     "    Harbour, 69  
     "    Lias, 232  
     "    Map, 480, 485, 491  
     "    Peat, 366  
     "    Raised Beach, 186  
     "    Scars, Map, 492  
     "    Submerged Forest, 152, 366  
 Redmire, 22  
 Reece, R. J., 307  
 Reed, F. R. Cowper, 252, 259, 293, 316, 336, 453  
     "    W., 150  
 Reef Knolls, 430  
     "    "    Formation of, 338  
     "    Lias, 86  
 Reefs, Carboniferous, 235  
 Rees, W. D. Wood, 442  
 Reeth, 239  
     "    Map, 492

- Reevah, 255  
 'Regional Geography,' 364  
     Geology, 408  
     Magnetic Disturbances, 234  
 REID, A. S., 171  
     C., 186, 189, 192, 241, 244, 316,  
         382, 394, 442, 453, 462, 477,  
         479, 485, 492, 493, 494, 497,  
         499, 500, 501  
     E. W., 220  
     ELEANOR M., 415  
     H., 115, 119, 150, 160  
     P. S., 93, 98  
 REIMER, DIETRICH, 316  
 Reindeer Antler in Peat, 346  
     Hessle, 403  
 Reinshaw Park, Map, 487  
 Relations, Coal Plants, 191  
     Geology and Vegetation, 384  
     Man and Ice Sheets, 132  
     Museums and Societies, 383  
     of Archæology and Geology,  
         78, 80  
     Permians and Trias, 443  
     Scientific Societies, 215  
     Upper Carboniferous, 148  
*Reliquæ Diluvianæ*, 38  
     *Isurianæ*, 76  
 Reminiscences, E. Hull, 428  
     W. C. Williamson, 290  
 Removal of Shingle, 120  
 RENEVIER, E., 136  
 RENNIE, G., 23, 24, 25  
*Rep. Brit. Assoc.*, xxxi., xxxiv., 48, 51,  
     52, 53, 54, 55, 57, 59, 63, 64, 65, 67,  
     68, 71, 79, 81, 83, 86, 88, 89, 90, 91,  
     92, 97, 99, 101, 102, 103, 104, 105,  
     106, 108, 111, 112, 117, 118, 119,  
     121, 122, 124, 127, 130, 131, 132,  
     133, 134, 135, 136, 137, 138, 139,  
     140, 141, 143, 144, 145, 146, 148,  
     149, 150, 151, 153, 155, 158, 160,  
     161, 162, 163, 166, 168, 169, 173,  
     174, 175, 176, 177, 178, 180, 181,  
     182, 183, 184, 187, 189, 193, 196,  
     199, 200, 202, 203, 204, 205, 206,  
     207, 208, 211, 212, 213, 215, 216,  
     218, 219, 222, 225, 226, 229, 230,  
     231, 232, 233, 234, 235, 237, 238,  
     240, 241, 242, 243, 245, 247, 248,  
     250, 256, 257, 258, 262, 263, 266,  
     273, 274, 276, 283, 286, 287, 288,  
     290, 294, 297, 303, 307, 309, 313,  
     314, 315, 318, 320, 321, 322, 323,  
     324, 325, 326, 327, 328, 329, 330,  
     331, 332, 333, 334, 335, 336, 337,  
     338, 339, 340, 341, 343, 344, 345,  
     346, 348, 350, 351, 352, 353, 354,  
     355, 357, 358, 359, 360, 361, 362,  
     363, 364, 366, 370, 371, 372, 375,  
     376, 377, 379, 380, 385, 388, 389,  
     390, 391, 392, 393, 394, 395, 397,  
     398, 399, 401, 402, 404, 405, 406,  
     408, 409, 410, 413, 417, 419, 420,  
     421, 422, 423, 426, 430, 432, 434,  
     435, 436, 437, 438, 440, 441, 444,  
     445, 448, 449, 450, 453, 455, 457,  
     459, 460, 461, 462, 463, 464, 466,  
     469, 470, 472, 475  
*Rep. Brit. Assoc. Gas Engineers*, 134  
     and *Proc. Manch. Field Nat. and*  
         *Arch. Soc.*, 435  
     Brighton Nat. Hist. Soc., 141  
     Croydon Micro. Club, 124  
     Dept. Science and Art, 274  
     East Kent Nat. Hist. Soc., 171  
     Malton Nat. Soc., 201, 202, 203  
     Manch. Sci. Students' Assoc., 182  
 Report on Coal Resources, 463  
     Coals for Navy, 70  
     Quarries, 472  
*Rep. Rugby School Nat. Hist. Soc.*, 154  
     159  
     Scarborough Phil. Soc., 82, 90  
     Southport Soc. Nat. Sci., 341, 377,  
         399, 444  
     Whitby Lit. and Phil. Soc., 399,  
         423, 425, 441  
     Yorks. Phil. Soc., 103, 207,  
         217  
 Reptile Footprints, Saltwick, 402  
     Scarborough, 61  
 Reptilia, Fossil, 59, 90, 93, 95, 105, 119,  
     170, 185, 216  
     Fossil, Catalogue, 234  
     Liassic, 434  
     Monograph, 100  
*Research*, 209, 210, 215, 218, 219, 220,  
     221, 222, 223, 224, 225, 226, 228,  
     229, 230, 233, 237, 239  
 Research, Suggestions for, 363  
 Reservoir, Chew, 430  
     Dale Dyke and Agden, 106  
     Derwent, 360  
     Langsett, 360  
 Resin, Vegetable, 153  
 Resources, Coal, 169  
 Restoration of *Cælacanthus*, 348  
*Retford News*, 406  
 'Retrospect of Geology,' 367  
 Revision, Carboniferous Corals, 399  
     Jurassic Bryozoa, 274  
*Revue Critique de Paleozoologie*, 293,  
     312, 318, 319, 321, 323, 326, 330,  
     332, 337, 339, 342, 346  
*Rev. Univ. Mines*, 125, 131  
 REYNOLDS, J., 105  
     J. B., 364  
     R., 115, 268, 288  
     S. H., 268, 345, 382, 416,  
         442, 445, 453  
*Rhacoceras ambiguum*, 424

- Rhadinichthys hancocki*, 445  
 „ *macrodon*, 445  
 „ *monensis*, 330, 337, 445  
 „ *planti*, 445  
 Rhind Lectures, 234  
*Rhinoceros*, 37  
 „ *antiquus*, 431  
 „ Doncaster, 378  
 „ Tooth, Dimlington, 422, 431  
 RHODES, J., 336, 345, 346, 354  
 Rhomb-porphry, Brandesburton, 329  
 „ Brantinghamthorpe 321  
 „ Burstwick, 356  
 „ Hessele, 290  
 „ Holderness, 304  
 „ Swine, 288  
 „ Yedmandale, 328  
 Rhætics, 138, 143, 211, 426  
 „ Gasteropoda, 350  
 „ Lamellibranchiata, 368  
 „ Ostracoda, 266  
 „ Scaphapoda, 350  
*Rhynchonella spinosa*, Distribution, 219  
 Rhynchonellæ, spinose, 221  
*Rhytidodendron*, Relationship of, 191  
 Ribble, 6, 200, 254  
 „ Erratics, 151  
 „ Map, 482  
 Ribblehead, 173, 254  
 „ Tunnel, 205  
 Ribblesdale, 212, 247, 252, 253, 262, 301  
 „ Boulders, 260  
 „ Cave, 314  
 „ Glacials, 248  
 „ Palæozoics, 75  
 „ Shales, 216  
 „ Silurians, 153  
 „ Slates, 69  
 „ Striated Surface, 391  
 RIBBLESDALE, LORD, 27  
 Riccall, 449  
 „ Map, 499  
 RICHARDSON, H., 354  
 „ J. ALARIC, 416  
 „ L., 383, 431, 448, 449, 452, 453  
 „ R., 9  
 „ T., 101, 103  
 „ WILLIAM, 441, 442  
 Richmond, 48  
 „ Crinoids, 80  
 „ *Diodontopsodus*, 174  
 „ *Hyalostelia*, 205  
 „ Mammalian Remains, 104  
 „ Map, 479, 493  
 „ *Peripristis*, 343  
 „ *Woodocrinus*, 407  
 ‘Richmondshire,’ 376  
 Richmondshire, History, 398  
 „ Romantic, 299, 307  
 RICKETTS, C., 119, 165, 207, 244, 259, 252  
 Rievaulx Abbey, 36  
 Rift Pot, 368, 369  
 RILEY, E., 129  
 Rillington, Boring, 288  
 Ripley, 44, 60, 99, 220, 222, 407  
 „ History of, 109  
 RIPLEY, W. Z., 316  
*Ripon*, 26, 27, 33, 54, 55, 56, 58, 60, 63, 66, 79  
*Ripon*, 17, 25, 26, 27, 33, 39, 54, 58, 79, 132, 259, 272, 305, 368, 374, 418  
 „ Boulders, 210, 256, 260  
 „ Drift, 155, 164  
 „ Geology of, 115  
 „ Guide to, 66, 83, 87  
 „ Gypsum, 282  
 „ History of, 36  
 „ Limestone, 66, 71  
 „ Lingula, 218  
 „ Map, 479, 481, 496  
 „ Marls and Limestone, 63  
 RIPON, MARQUIS OF, 199  
 „ Obituary, 424  
*Ripon*, Natural Pits, 115  
 „ *Othoceras*, 132  
 „ Permians, 173, 186, 285  
 „ Subsidences, 167  
 „ Swallow Holes, 157  
 „ Water Supply, 303  
 Riponden, Map, 500  
 Ripple-marked Sandstone, 282  
 ‘Rise of Palæontology,’ 287, 297  
 Rishton, 390  
 Rishworth, Map, 486  
 Rivelin Valley, 113  
 River Aire, 231  
 „ Sources of, 323  
 „ Capture, Don, 359  
 „ Yorkshire, 377  
 „ Channels, 324  
 „ Old, 455  
 „ Courses, 129  
 „ Floods, 231  
 „ Gravels, 264  
 „ Hull, Changes, 236  
 „ Map, 404  
 ‘River, Romance of,’ 402  
 „ Valleys, 283  
 Rivers, Development of, 273  
 „ Geological History, 336  
 „ Investigation of, 466  
 „ Mountains and Sea Coast of Yorks., 78, 82  
 „ of Axholme, 409  
 „ of East Coast, 220, 341, 348  
 „ of Great Britain, 341, 348

- Rivers, Outfall of, 290  
 " Pollution Commission, 133, 138  
 Road Construction, 333  
 " Materials, 333  
 Road-metal Quarries, 349, 351, 353  
 Roadstone, Distribution of, 313  
 " Tests, 382  
 ROBERTS, A., 259, 268, 336  
 " E. E., 416, 431, 462  
 " G. G., 176  
 " G. C., 105  
 " G. E., 98, 104  
 " THOMAS, 207, 253  
 " R. W. B., 244, 252  
 ROBERTSON, D., 133, 136, 138, 141  
 Robin Hood Quarries, 350, 468, 470  
 " Hood's Bay, 15, 210, 222, 261,  
 276, 380, 392,  
 394, 414  
 " " " Ammonites, 408  
 " " " *Avicula contorta*, 94  
 " " " Boulders, 220, 299  
 305, 324, 354,  
 413  
 " " " Coast Changes,  
 465  
 " " " *Dentalium*, 387,  
 395  
 " " " Fossil Shells, 437  
 " " " Geology of, 392  
 " " " Glacials, 287  
 " " " Lias Fossils, 304  
 " " " Lias *Trigonæ*, 441  
 " " " Mammoth Tooth,  
 325  
 " " " Mammoth Tusk,  
 407  
 " " " Map, 479, 481, 486  
 493  
 " " " Star-Fish, 116  
 ROBINSON, F. K., 93  
 " H., 115  
 " J. FRASER, 268, 288, 316,  
 317, 326, 346, 354, 364,  
 373, 383, 453  
 " J. W., 44  
 " ROBERT, 52  
 " W., 364, 412, 416, 472  
 ROBSON, R. M., 449, 453  
 Rochdale, Flint Implements, 175  
 Roche Abbey, 458, 467  
 'Roches Volcanique,' 258  
 Rock Basins, Origin, 110  
 " Salt, 200, 469  
 " " Cleveland, 122  
 " " Middlesbrough, 102  
 " -Staining, 130  
 " Structure, Quantitative Method  
 404  
 " Sorby on, 160  
 " -Forming Algæ, 469  
 Rockcliff, Map, 492  
 Rockingham Colliery, 267, 271  
 'Rocks and Fossils, Oxford,' 100  
 " Calcareous algæ in, 459  
 " Chemical Examination, 92  
 " Deposits of, 467  
 " Mechanical Examination, 92  
 " Volcanic, 345  
 " wearing down of, 469  
 " with Radiolaria, 451  
 ROEBUCK, W. DENISON, 142, 145, 182,  
 186, 189, 307, 326, 472  
 Roebuck in Yorks., 97  
 ROFE, J., 105  
 Rokeby, 249, 253  
 " Park, Boulders, 274, 276  
 ROLLESTON, GEORGE, 149, 150  
 Roman Geography of S. E. Yorks., 221  
 " Remains, Aldborough, 68  
 " Villa at Harpham, 365, 374, 385  
 'Romance of a River,' 402  
 " of Modern Geology,' 411  
 ROMANES, J., 416  
 Romanes' Lecture, 303  
 Romano-British Remains in Caves, 66  
 Romans, 50  
 Romantic Richmondshire, 299, 307  
 Rombald's Moor, 22, 272  
 " " Features, 126  
 " " Glacials, 255  
 " " Prehistoric Remains,  
 205  
 ROME, J. L., 115  
 Ronaldkirk, Map, 491  
 Roof of Coal Seams, 187  
 ROOKE, H., 21  
 " J., 56, 59, 67  
 Roos Carr Images, 174  
 " Map, 500  
 Root of *Astromyelon*, 171, 176  
 " *Calamites*, 279, 290  
 Rootlets, Parasite of Stigmarian, 366  
 ROSE, A., 77, 78  
 Rosebery Topping, Jurassic Plants,  
 464  
 Rosedale Abbey, Map, 479, 481  
 " " Ironstone, 87, 121  
 " " Map, 493  
 " " Minerals, 180, 186  
 " Geology of, 189  
 " Iron Ore, 224  
 " Ironstone, 85, 91  
 " " Origin, 344  
 " Map, 485  
 ROSENBUSCH, H., 207, 288  
 Rossendale, History of, 114  
 Rostellariæ, Cretaceous, 106  
 " Speeton, 109  
 ROTH, H. LING, 383, 451, 453  
 Rotherham, 245, 303  
 " Aldwarke Colliery, 160

- Rotherham, Coal, 118  
     " Geology of, 159  
     " History of, 159  
     " Main Colliery, 246, 301  
     " Map, 502  
     " Rock, 304  
     " Water Supply, 420  
 Rothliegende, 95  
     " Beds, Knaresborough, 120  
 Rothwell Haigh, 439  
     " Colliery, Map, 490  
     " Map, 489  
     " Permian. Boulders, 438  
     " Map, 500  
 ROTUREAU, A., 88, 90, 103  
 Rough Rock, Halifax, 137  
     " Lithology of, 442  
 Round-Boulder Hills, Craven, 135  
 Roundhay Park, 470  
 Roundwood Colliery, Map, 488  
 ROWE, A. W., 288, 360, 363, 364, 365, 404  
 ROWLEY, B., & Co., 246  
     " W., 126, 150, 383  
     " WALTER, 416  
 Rowten Pot, 301, 348  
 Royal Commission on Coal Supplies, 350, 358, 368, 370, 373, 379, 390  
     " Coast Erosion, 387, 435  
     " Water Supply, 116  
     " Geographical Society, 417  
     " Scot. Soc. Art, 77  
     " Oak, Map, 487  
 Royston Boring, Map, 488  
     " Boulders, 276, 311, 376  
     " Map, 501  
     " Sanitation of, 382  
 Rubble, Infra-Glacial, 363  
 RÜCKER, A. W., 155, 234, 235, 244, 245  
 Rudby, Map, 492  
 RUDLER, F. W., 374  
 Rudston Monolith, 171, 244, 246, 471  
     'Rudstone,' 212  
 Rufforth, Map, 498  
 RULE, ALEXANDER, 416, 431, 442  
 Rumbles Moor, Map, 483  
 Rumbolds Moor, Mining, 445  
 Runswick, 408, 417, 468, 472  
     " Bay, 279  
     " Boulders, 220  
     " Map, 492  
     " *Zamia gigas*, 72, 111  
     ' Rural Economy,' 22  
     ' Rural Water Supply,' 170  
 RUSSEL, R., 14, 16, 17  
 RUSSELL, A. G., 253  
     " R., 120, 122, 125, 126, 132, 145, 150, 154, 155, 158, 159, 160, 235, 477, 478, 479, 480, 483, 484, 487, 489, 490, 491, 493, 499, 500, 501, 502  
     " W., 288, 373  
 RUTHVEN, J., 82, 88, 89  
 Rutland, Geology of, 140  
     " Moor, Map, 493  
 RUTLEY, F., 480  
 RUTTY, J., 15, 16, 17  
 Rye, 14  
     " and Derwent Drainage, Report, 92  
     " Drainage, 76  
 Ryehill, 280  
 Rylands Main, 246  
 SABINE, E., 122  
*Saccamina carteri*, 344  
 Saddleworth, 209, 210, 220, 447  
     " Coal, 176  
     " Map, 478, 483, 486, 501, 502  
     " Section, 181  
     " Strata, 166  
     " Tunnel, 166  
     " Yoredales, 285  
*Særtryk af Aarb. for Nord. Oldk. og Hist.*, 174  
 Safety Lamps, 114  
*Sagenopteris phillipsii*, 298  
 St. Austin's Stone, 282  
 St. John's Colliery, 246  
     " Map, 488  
     " Map, 488  
 St. Magnus's Well, 12  
 St. Mark's, Map, 493  
 St. Mungo's Well, 3, 8, 12  
 St. Peter's Hill, Map, 490  
*St. Petersburg*, 225  
 Saleniadæ, 89  
 SALES, H., 307, 326  
 SALFIELD, HANS, 462  
 Saliferous Strata, 134  
 Saline Chalybeates, 80  
 SALMON, H. C., 96  
 Salopian Graptolites, 445  
     " Rocks, Cautley, 434  
 Salt, 453, 469  
     " Borings, 232, 240, 338  
     " Circulation of, 330, 340  
     " Cleveland, 122, 206, 225, 252, 292  
     " Durham, 237, 292  
     " Industry, 227, 228  
     " Middlesbrough, 237  
     " Lake, Permian, 381  
     " Middlesbrough, 102, 177, 202, 219, 229, 245, 253, 292, 331

- Salt, Mining, 466  
 „ Position of, 232  
 Saltburn, 183, 201, 220, 241, 276, 293, 370  
 „ Boulders, 210, 275, 280, 293, 295, 306  
 „ Geology of, 228  
 „ Ironstone, 106  
 „ Map, 481, 492  
 SALTER, J. W., 84, 94, 96, 106  
 „ S. J. A., 192  
 Saltersgate, 271  
 Salthaugh Grange, Map, 501  
 Saltley, Gravels, 296  
 Saltmarshe, Map, 500  
 „ Wells, 144  
 Salton, Water, 178  
 SALTONSTALL, THOMAS, 278, 298  
 Saltwick, Footprints, 299, 402, 403, 408  
 „ Nab, Gasteropoda, 295  
 „ *Unio kendalli*, 439  
 SALVENSEN, C. E., 288  
 Sancton, 308  
 „ Map, 486  
 Sand and Shingle, Travel of, 461  
 Sand-Dunes, 468  
 Sand-le-Mere, Estuarine Shells, 429  
 „ Lake Dwelling, 307  
 Sand-pipes, 365, 366  
 Sand, Sea, 354  
 „ Waters, 468  
 SANDERS, W., 26  
 SANDFORD, W. ASHFORD, 107, 109, 117, 119  
 Sands and Clays, 453  
 „ in Boulder Clay, 239  
 „ Middle, 285  
 Sandsend, Striated Surface, 348  
 Sandstones, Action of Heat on, 93  
 „ Aislaby, 333  
 „ Almondbury, 96  
 „ Architecture, 367  
 „ Bradford, 236, 382  
 „ Building, 59, 127  
 „ Constitution, 170  
 „ Drift Coal in, 247  
 „ Felspathic, 382  
 „ Footprints, 403  
 „ Halifax, 382  
 „ Hipperholme, 382  
 „ Keuper, 467  
 „ Lancashire, 438  
 „ Leeds, 197  
 „ Macrospores, 146  
 „ Mining of, 359  
 „ Origin, 161  
 „ Perched Block, 185  
 „ Shales, 83  
 „ Yorkshire, 358, 367  
 Sanitary Condition, Easingwold, 292  
 Sanitary Condition, Hull, 172  
 „ „ Sculcoates, 229  
 „ „ York, 260  
*Sanitary Record*, 156  
 Sanitation, and Geology, 319  
 „ Barnard Castle, 372  
 „ Batley, 382  
 „ Bedale, 403  
 „ Beverley, 360  
 „ Denaby Main, 370  
 „ Doncaster, 370  
 „ Emley, 400  
 „ Farnley Tyas, 400  
 „ Heckmondwike, 402  
 „ Helmsley, 397  
 „ Howden, 370  
 „ Knaresborough, 402  
 „ Leyburn, 390  
 „ Morley, 393  
 „ Pocklington, 382  
 „ Royston, 382  
 „ Startforth, 372  
 „ Whitby, 390, 400  
 SAUNDERS, —, 27  
 „ T. W., 414, 416, 429, 431, 472  
 „ W., 25  
 Saurians, Boulby, 110  
 „ Kellaways, 327  
 „ Kettleiness, 67  
 „ Scarborough, 61  
 „ Whitby, 54, 59, 63, 106, 389, 421  
 Sauropterygia, Lias, 105  
 „ Whitby, 434  
 SAUVAGE, H. E., 318, 319, 326, 330, 337, 339, 346, 349  
 Saville Pit, Map, 489  
 Sawley, 262  
 „ Abbey, 272  
 „ Map, 496  
 Saxby, Map, 497  
 Saxon Burial Mounds, 373  
 Saxton's Map, 198  
 Scalby, 45, 261  
 „ Contortions, 300  
 „ Map, 494  
 „ Mills, Boulders, 318, 328  
*Scaldia carbonaria*, 412  
 Scale-fish, Lias, 124  
 Scales, Structure, 72  
 Scampston, Map, 495  
 Scamridge Dykes, 298  
 Scandinavia, Contour, 296  
 Scandinavian Boulders, 256, 257, 285, 432  
 „ Boulders in England, 278  
 „ Ice, 218  
 „ Ice Sheets, 265, 306, 314, 409, 461  
 „ Indicator-Boulders, 415

- Scaphognathus purdoni*, Whitby, 217  
 Schapopoda, Catalogue of, 350, 359  
 „ Lias, 350  
 „ Oolitic, 350, 359  
 „ Rhætics, 350  
 Scarborough, Scarbro, Scarbrough, 4,  
 5, 6, 7, 8, 12, 13, 17, 21, 22, 24, 26,  
 27, 28, 29, 32, 39, 40, 42, 43, 44,  
 45, 48, 49, 50, 51, 81, 177, 183,  
 203, 239, 242, 289, 298, 302, 308,  
 356, 357, 361, 381, 383, 395, 412,  
 423, 432, 437, 440, 449, 467  
*Scarborough*, 24, 27, 32, 39, 40, 42, 43,  
 45, 49, 50, 57, 62, 179, 234, 459  
 Scarbrough, Boring near, 184  
 „ Boulder Clay, 336  
 „ Boulders, 210, 260, 309,  
 370  
 „ Brachopoda, 260  
 „ Cornbrash, 282, 393, 413  
 „ „ Fossils, 57  
 „ Curious Oysters, 125  
 „ *Cypris concentrica*, 100  
 „ Drift, 104  
 „ *Estheria*, 85  
 „ Estuarines, 282  
 „ Excavations, 474  
 „ Excursion, 215  
 „ Fossil Corals, 226  
 „ „ Footprints, 469  
 „ „ Plants, 106, 126  
 „ Geology, 163, 174, 221  
 „ 228, 264  
 „ „ South of, 361  
 „ Guide, 23, 58, 61, 62, 93,  
 376  
 „ Harbour, 69  
 „ Health Resort, 179  
 „ History, 172  
 „ in 1783, 73  
 „ Kellaways, 456, 458  
 „ Landslips, 237, 336  
 „ Limestone Ammonites,  
 448  
 „ „ *Gervillia*, 441  
 „ Map, 479, 481, 494  
 „ Memorials, 234  
 „ Meteorite, 205  
 „ Minerals, 82  
 „ *Miscellany*, 49  
 „ Mollusca, 411  
 „ Museum Guide, 371  
 „ Naturalists, 173  
 „ Nautili, 231  
 „ North Cliff, 238  
 „ Oolites, 64, 102, 361  
 „ Oolitic Footprints, 460  
 „ *Ophiolepis*, 166  
 „ *Phil. Soc.*, 82, 371  
 „ Protection of Cliff, 240  
 „ Sandstones, 52  
 Scarborough, Saurian at, 61  
 „ Spa, Spaw, 52, 61, 62, 92,  
 98, 234  
 „ Springs, 57  
 „ *Stomatopora*, 274  
 „ Underground Heat, 199  
 „ „ Waters, 183  
 „ Valleys, 74  
 „ Water, 174  
 „ Water Supply, 231  
 „ Wells, 54  
 Scarbroite, 46  
 Scarcroft Hill, Landslip, 162  
 Scargill, Map, 492  
 Scenery, Airedale, 234  
 „ and Geology, 330  
 „ Causes, 341  
 „ Cleveland, 352  
 „ Craven, 253  
 „ Development, 306  
 „ East Coast, 96  
 „ England, 341, 350, 359  
 „ Nidderdale, 384  
 „ Origin, 118  
 „ Scientific Study of, 325  
 „ Swale Valley, 299  
 „ Types of, 303  
 „ Wharfedale, 328  
 „ Whitby, 52  
 „ Yore Valley, 299  
 SCHARFF, R. F., 394  
 Schillerization, Theory of, 198  
 SCHOFIELD, J., 21  
 Scholes, Map, 489  
*Science Gossip*, 111, 116, 126, 129, 132,  
 136, 137, 143, 146, 150, 151,  
 155, 159, 168, 194, 195, 200,  
 203, 207, 208, 212, 248, 277,  
 287, 297, 299, 301, 302, 306,  
 307, 308, 309, 311, 313, 317,  
 325, 327, 335  
 „ *Progress*, 278, 284, 287, 298,  
 306, 393  
 Science Year Book, xxxiii.  
 Scientific Aspects, Health Resorts, 221  
 „ Publications Quoted, ix.  
 „ *Roll*, 462  
 „ Societies, Relations of, 215  
 „ Study of Scenery, 325  
 „ Work, Amateur Spirit in,  
 381  
*Scots Magazine*, 15  
*Scotsman*, 161  
 SCOTT, D. H., 278, 279, 280, 288, 290,  
 307, 324, 326, 337, 346, 354,  
 364, 365, 374, 383, 393, 394,  
 403, 416, 430, 431, 442, 453  
 „ Mrs. D. H., 383  
 „ J., 13  
 „ RINA, 383  
 „ W. L., 106



- Scottish Geographical Magazine*, 356,  
 424  
 Scottish Rocks, East Yorkshire, 346  
 " " Holderness, 353  
 Scriptural Geology, 56  
 Scripture, Geology of, 51  
 SCUDAMORE, C., 36, 37, 46, 51  
 Sculcoates, Diptheria, 152  
 " Sanitary Condition, 229  
 Sculpture, Anglian, 437  
 Sea, Carboniferous, 413  
 " Cliffs and Escarpments, 113  
 " Coast, 349  
 " " Changes, 364  
 " " Erosion, 367  
 " Erosion, see Coast Erosion.  
 " Level, Oscillations, 336  
 " Lilies, 236  
 " Sand, 354  
 " Shores and Faults, 264  
 Seaside Water, 156  
 Sea-spoil, 146  
 Sea-Spray, Inland, 455  
 Sea *versus* Land, 150  
 Sea-Walls, 76  
 Seacroft, Boring, Map, 490  
 " Map, 484, 499  
 Seal Remains in Drift, 463  
 SEAL, S., 165  
 Seamer, *Asteracanthus*, 437  
 " Diplopodia Teeth, 473  
 " Map, 485, 495  
 Seams in Yorkshire Coalfield, 234  
 SEARLE, ALFRED B., 453  
 Searle, Coal, 149  
 Seaton Ross, Map, 499  
 Secondary Fossil Plants, 204  
 " Rocks, Water, 153  
 Secrets of the Hills, 437  
 Sections, Bentley, 425  
 " Bradford, 389  
 " Bridlington, 365  
 " Carboniferous, 53  
 " Cave, 195  
 " Chalk, 364  
 " Coalfields, 59, 456  
 " Coal Measures, 390  
 " " Seams, 121  
 " " Strata, 466  
 " General Coal Measures, 275  
 " Halifax, 328  
 " Hull Docks, 321, 332, 351  
 " South Cave, 339  
 " Upton and Kirk Smeaton,  
 178  
 " Yorkshire Coalfield, 58, 59,  
 476  
 " " Strata, 391  
 Sedbergh, 44, 201, 207, 265, 273, 416,  
 427, 470, 472  
 " Extinct Animals, 195  
 Sedbergh, *Geol. Surv. Mem.*, 127  
 " Geology of, 218  
 " Graptolites, 434, 445  
 " Map, 480, 493  
 " Mica-Traps, 157  
 " Palæozoics, 430, 441  
 " Red Beds, 143  
 " Trap Dykes, 232  
 " Wenlock and Ludlow, 252  
 SEDGWICK, A., 40, 41, 43, 46, 48, 53,  
 63, 64, 67, 69, 75, 78, 80, 82, 83,  
 86, 109, 329  
 Sedgwick Museum, 445  
 " Prize Essay, 336  
 Sediment Theory, 138  
 Sedimentary Rocks, Classification of,  
 373  
 " " Petrology, 304,  
 460  
 Seed-Bearing Plants, History of, 374  
 " " Palæozoic, 358  
 Seed, Evolution, 393  
 " Lyginodendron, 354  
 " Palæozoic, 364  
 Seeds, Carboniferous, 374  
 " Palæozoic, Structure of, 394  
 " Peat, 406, 416  
 SEELEY, H. G., 106, 165, 192, 208, 217,  
 259, 278, 288  
 Sefström Glacier, 452  
 Seine, River, 200  
 Seismic Phenomena, 281  
 Selachian Genus *Notidanus*, 200  
 Selachii, Carboniferous, 218  
 Selby, 112  
 Selby, 308, 389  
 " Abbey Stone, 447  
 " Borings, 263, 399, 410, 426  
 " History of, 112, 157  
 " Map, 479, 482, 483, 500  
 " Water, 153, 196  
 " Wells, 144  
 SELLERS, MAUD, 453  
 Semerwater, 220  
 " Origin of, 145  
 Septarian Nodule, Piethorn, 269  
 Sequence, Carboniferous, 396  
 " Glacial Beds, 123  
 " Plants in Peat, 393  
 Settle, 73, 282, 351, 359, 369, 377, 399,  
 408, 436,  
 Settle, 19, 20, 203, 252, 297, 302, 306,  
 330, 335, 396  
 " *Bairdia curta*, 159  
 " Blastoidia, 311  
 " Boulders, 203  
 " Carboniferous Crustacea, 123  
 " " Zones, 274  
 " Cave-Men, 130  
 " Caves, 66, 108, 121, 124, 126,  
 129, 130, 131, 132, 134, 135,

- 141, 146, 148, 150, 151, 155,  
160, 201, 223
- Settle, *Chænocaris*, 305, 315
- " Chiton, 97
- " Conglomerate, 216
- " Crinoids, 467
- " Crustacea, 156
- " *Cyclus*, 259, 270
- " *Dithyrocaris*, 215
- " Drifts, 180
- " *Entomis burrovii* at, 184
- " Entomostraca, 108
- " Excursion, 192
- " Faults, 413
- " Fossils, 155
- " Geology, 146, 282, 292, 429, 440
- " Glacials, 361
- " Map, 478, 486, 496
- " *Murchisonia*, 248
- " Ostracoda, 276
- " Palæozoic Crustacea, 127
- " Palæozoics, 207
- " Silurians, 111
- " *Spirifer lineata*, 259
- " *Tabulipora*, 452
- " Wenlock and Ludlow, 252
- Settrington Boulders, 344
- " Map, 486
- Severn Plain, 450
- " Glacials, 471
- SEWARD, A. C., 217, 268, 278, 298, 301,  
307, 317, 322, 326, 327, 331, 337,  
346, 355, 365, 383, 394, 431, 442,  
460, 462, 472, 473
- SEWELL, E., 126, 150
- " J. T., 374, 383, 473, 474
- Sewerby, Ancient Beach, 225, 371
- " Buried Cliff, 216
- " Deposit, 447
- " *Gadus*, 336
- " Gravels, 157
- " Land Shells, 363
- " " " in Rubble, 353
- SHAKESPEAR, Mrs., 459, 462, 469, 473
- Shale, Entomostraca, 116
- " Oil from, 428
- " Waste Heaps, 428
- Shales, 345
- " and Sands, 453
- " Stockdale, 216
- " Weathering, 113
- Shallow Seas, Physics of, 371
- Shap Boulder, Whorlton, 457
- " Granite, Atwick, 293
- " " Aytton, 352
- " " Boulders, 105, 157, 162  
299
- " " " Lincolnshire,  
289
- " " Burstwick, 338, 356
- " " Claro Hull, 303
- Shap Granite, Filey, 168, 173
- " " Grosmont, 301
- " " Horbury, 343
- " " Hull, 417
- " " Monument, 335
- " " Mount Grace Priory  
313
- " " Royston, 311, 376
- " " Spurn, 222
- " " Whorlton, 411
- " Wells, 228
- Sharlston, Boring, 150
- " Map, 483, 484
- SHARMAN, —, 298
- " G., 287, 288
- SHARPE, HILDA, D., 442, 462, 465, 473,  
476
- SHAW, PETER, 12, 13, 52
- Shaw Sike, Geology, 347
- SHEAHAN, JAMES JOSEPH, 82, 83, 86,  
103, 109, 126
- Sheahan and Whellan's History, 82, 83
- Sheffield, 13, 14, 42, 159, 466
- Sheffield, xxxiv., 18, 282, 365, 372,  
422, 435, 438, 467
- " Bibliography, xxxiv.
- " Boring, 282
- " Coal, 146
- " Collieries, 124
- " Corporation Waterworks,  
318
- " *Daily Telegraph*, 152, 301
- " Erratics, 182
- " Fossil Trees, 148
- " Ganister Bed, Plants, 389
- " Geology, 159, 428, 439
- " Great Flood, 102
- " Guide, 159
- " Handbook, 426, 428
- " Macrospores, 146
- " Map, 477, 481, 482, 502
- " Mining, 427
- " Naturalists' Society, 222
- " Sections, 306
- " Springs, 93
- SHEFFIELD, W. E., 26
- Sheffield's Trough Fault, 381
- Shelf, Boring, Map, 490
- SHELFORD, W., 119, 167, 171
- Shell-beds, Bridlington, 169, 175
- " Dimlington, 169, 175
- " Glacial, 198
- " Speeton, 169, 378, 385, 395,  
432
- Shells, Chalk Rubble, 353
- " Coalfield, 61
- " Drift, 154
- " Fossil, Calcium Carbonate, 437
- " Kelsey Hill, 403, 404
- " Lacustrine Deposits, 364
- " Layers, 439

- Shells, Sand-le-Mere, 429  
 Shelly Boulder Clay, Bridlington, 185  
     " Clay, Dogger Bank, 455  
     " Glacial Deposits, Coast, 296  
     " Moraine, Spitsbergen, 452  
 SHELSWELL, J., 478, 497  
 SHEPARD, CHARLES UPHAM, 222  
 Shepard Collection, Meteorites, 222  
 SHEPPARD, GEORGE, 403, 442, 453, 462, 473  
     " THOMAS, 278, 287, 289, 298, 299, 307, 308, 309, 317, 327, 328, 329, 335, 337, 338, 346, 347, 348, 352, 355, 356, 357, 365, 374, 383, 384, 394, 395, 396, 403, 404, 409, 416, 417, 418, 426, 429, 431, 432, 442, 443, 444, 447, 449, 453, 454, 457, 459, 463, 465, 469, 473, 474  
 SHERBORN, C. DAVIES, xxxv., 212, 217, 229, 235, 237, 242, 244, 364, 365, 384, 404  
 Sherburn, 222, 224  
     " Map, 495, 499  
     " Naturalists at, 186  
 Sheriff Hutton, Map, 496  
 SHERLOCK, ROBERT LIONEL, 443, 474  
 Shibden Geology, 306  
     " Valley, 194  
 Shiffnal, Erratics, 203  
 SHIMER, HERVEY WOODBURN, 474  
 Shingle, Removal, 120  
 Shipley Glen, 434, 446  
     " Striated Surfaces, 296  
 Shipton, 389  
     " Cave, 243  
     " Gravels, 99  
     " Map, 497  
 Shireoaks, Map, 487  
 SHIRREFF, J., 23, 24, 25  
 Sholes, Map, 484  
 SHONE, W., 268  
 Shore Deposits, Bibliography, 290  
     " Pre-glacial, 447  
     " Protection, 388  
 SHORT, T., 4, 10, 12, 13, 16, 17  
 Shropshire, 380  
 SHRUBSOLE, G. W., 160, 171  
 SHUFFREY, W. A., 244  
 Shunner Fell, Trilobite, 471  
 Siddal, Plant Remains, 348  
 Sigillaria, 187  
     *Sigillaria*, Meanwood, 246  
     " Relationship, 191  
     " Structure, 320  
     " *Vascularis*, South Ofram, 138  
     *Sigillaria*, Affinities, 166  
 Sigma, 301  
 Siliceous Sponges, New, 232  
 Silicified Boreholes, 455  
     " Plants, Millstone Grit, 346  
     " " Seam, Swarth Fell, 336  
 Silkstone Coal, 142, 149, 283  
     " " Gas, 126, 145  
     " " Map, 487, 488  
     " " Seams, 139  
     " Colliery, 238  
     " Fall, Map, 487  
     " Seam, 273  
     " " Gas in, 124  
 Silting up of Humber, 145  
 Siluria, 80, 90, 112  
 Silurian, 212  
     " Base, Ewcross, 228  
     " Brachiopoda, 124, 182  
     " Break in, 111  
     " Dent, 110  
     " Erratics, 148, 151  
     " Ewcross, 241  
     " Ingleborough, 392  
     " Ingleton, 221  
     " Lake District, 129  
     " Teesdale, 154  
 Silver, Metallurgy, 333  
 SILVERTHORNE, A., 84, 128, 129, 186  
 Simon Fell, 416  
 SIMPSON, EDWARD, 110  
     " H., 366  
     " HENRY, Obituary, 459  
     " MARTIN, 59, 64, 65, 83, 90, 106, 109, 112, 115, 186  
     " W., 4, 5, 7, 112, 278, 289, 299, 317, 324, 328, 335, 338, 347, 353, 356, 366, 418  
     " W., Types of Belemnites, 423  
 Simpson's Spring Boring, Map, 489  
 Sinkings, see Borings  
     " East Yorkshire, 379  
     " Yorkshire Coalfield, 234  
*Sinus Salutaris*, 50  
*Siphonia*, Bridlington Chalk, 58  
     " *fusiformis*, 58  
 Site of Ravenser, 359  
*Sitz k-preuss. Akad. Wissensch. Berlin*, 256  
 SKEAT, WALTER W., 454  
 Skeffling, Map, 501  
 Skelton, 259  
     " in Skoska Cave, 377, 388  
     " Map, 492, 497  
     " Park Mines, 176  
 Sketches Around Ingleborough, 77  
 Skidby, Boulders, 269  
     " Map, 500  
 Skiddaw Slate Series, 99  
 Skipsea, 42, 270, 308, 356  
     " Boulders, 259  
     " Deer Remains, 228

- Skipsea, Lacustrine Deposit, 263  
     " Map, 498  
 Skipton, 47  
 Skipton and Ilkley Railway, 201, 202  
     " Carboniferous Limestone, 165  
     " Cave, 250, 257, 266  
     " Foraminifera, 277  
     " Geology, 148, 158, 201, 356  
     " Knolls, 312  
     " Lead Veins, 178  
     " Map, 478, 483, 486, 497  
     " Mines, 65  
     " *Prolecanites*, 273  
     " Vegetation, 356  
     " Water, 248  
 Skipwith, Map, 499  
 Skirethorns, Cave, 235  
 Skirlaugh, Boulders, 280, 300  
     " Sanitation, 307  
 Skoska Cave, 388  
     " Skeleton, 377  
 Skull of Bison, Kelsey Hill, 417  
     " Elephant, Kilnsea, 317  
     " Ichthyosaurus, Whitby, 165  
     " Pterosaurian, 217  
 Skyethorne, 266  
 Slack Hills, Map, 487  
 SLADE, H. P., 317  
 Slag, Analysis, 172  
     " Heaps, Ancient, 445  
 Slaidburn, *Deltodus*, 330  
     " Map, 482, 486, 496, 497  
     " *Palæoneilo*, 314, 323  
 Slate Rocks, 46  
 SLATER, G., 268  
     " I. L., 395  
     " M. B., 201, 208, 376, 384  
 Slates, Classification, 69  
     " Green, Ingleton, 119  
 Sledmere, 239, 247, 253, 308  
     " Map, 497  
 Sleet's Ghyll, 438  
 Sleightholme Beck, 355  
 Sleights, 468  
     " Moor, Map 493  
 Slickensides, Explosive, 204  
 Slingsby, Jurassics, 259  
     " Map, 486, 495  
 SLINGSBY, SIR WILLIAM, Memoir, 97  
 SMALES, GIDEON, xxxiv.  
 SMEATON, J., 22, 30  
 Smelting Furnace, Whitby Moors, 441  
     " Mediæval, 455  
 SMITH, —, 42  
     " A., 69, 93  
     " ALFRED, 58, 59, 63, 70  
     " B., 418  
     " B. M., 420  
     " C., 26  
     " CHARLES, 57, 59, 63, 65, 66  
     " C. R., 65, 66  
 SMITH, E. I., 137  
     " FREDERICK, 418  
     " F. W., 318  
     " G. F. HERBERT, 454  
     " HENRY ECROYD, 76, 106  
     " H. G., 474  
     " J. T., 70  
     " REGINALD, A., 463  
     " S., 395, 404  
     " STANLEY, 444, 454, 463  
     " THOMAS, 457  
     " W., 31, 32, 33, 34, 36, 39, 43,  
         44, 50, 101, 103, 107, 294,  
         296, 317, 329  
     " WILLIAM, 57, 86, 109, 166, 171,  
         186, 238, 240, 244, 454  
     " " Biography, 57  
     " " Life of, 349  
     " " Memoirs, 65  
     " W. G., 350, 353, 354, 356, 363,  
         367, 384, 418  
 Smith's Geological Maps, 296  
 SMITHSON, HENRY, 92  
     " J., 40  
 SMYTH, W. W., 84, 141, 142, 146, 477  
 SMYTHE, —, 438, 444  
 Snaith, Boring, 172  
     " Geology, 181  
     " Map, 477, 482, 501  
     " Water, 196, 240, 263  
 Snakestones, 425, 432, 447, 454, 457  
     " Whitby, 308  
 Snapethorpe Boring, Map, 488  
 Snowfall of Glacial Period, 267  
 Snyderdale Colliery, Fossils, 209  
     " Colliery, Map, 488  
 Societies and Museums, Relationship,  
     383  
 Society of Arts, 188  
 Soft Waters, Bradford, 452  
 Soil Waters and Typhoid, 349  
 Soils, 23  
     " Analyses, 66, 67  
     " and Disease, 139  
     " Classification, 60  
     " Cleveland, 418  
     " Distribution, 168  
     " Fertility, 64  
     " Mirfield, 215  
     " West Yorkshire, 70  
     " York, 188  
 Solaster, Huntcliff, 221  
     " *murchisoni*, 202  
 Solenidæ, 127  
*Solenopora jurassica*, 262, 264  
 SOLLAS, WILLIAM JOHNSON, 328, 418  
 SOLLITT, J. D., 81  
 Solution Planes, 198  
 Somerset Caverns, 387  
 Soothill Boring, Map, 489, 490  
 SOPWITH, THOMAS, 102, 103

- SORBY, HENRY CLIFTON, 74, 76, 78, 81,  
86, 89, 90, 93, 141,  
160, 165, 180, 181,  
384, 404  
" " " Memoir, 383  
" " " Obituary, 398  
" " " 399, 401, 402, 414, 418  
Sources, Boulders, 328, 337, 338  
" Humber Warp, 339  
" Lincolnshire Coast Boulders,  
314  
" River Aire, 235, 245, 323, 332,  
456  
South Anston, Map, 502  
" Carr, Boring, 381, 410  
" " Section, 339  
" Cave, 60, 62, 88, 210, 270, 328,  
395, 419  
" " Boulders, 402, 429  
" " Denudation, 382  
" " Kellaways, 462  
" " Map, 477, 486  
" East Yorkshire, Geology, 372  
" " Pliocenes, 391  
" " Structure of,  
362  
South Eastern Naturalist, 471  
South Ferriby, 270, 308  
" " *Protosphyraena*, 309  
" Kirkby, 246  
" Milford, 222  
" Otterington, Map, 494  
" Owsram, *Sigillaria*, 138  
" Stainley, Limestone, 66  
" Stockton, Map, 492  
" Yorkshire, Coalfields, 130, 149,  
164, 281  
" " Geology, 236  
South Yorks. Viewers' Assoc., 88  
Southcar, 283  
Southburn, Boulders, 220  
Southport, 355  
Souvenir of Hull Conference, 453  
Sowden Air Pit, Map, 490  
Sowerby, Boulders, 276, 278  
" Bridge, Map, 500  
" Fossil Fish, 318  
SOWERBY, J., 26, 27, 28, 29, 30, 31, 33,  
34, 37, 39, 46  
" J. D. C., 41, 46, 59  
Spa Wells, 473  
" Waters, 335  
Spadacrene Anglica, 2, 3, 13  
" Eboracensis, 4, 12  
SPATH, LEONARD FRANK, 474  
Spathic Carbonate of Iron, 66  
Spar, Knaresborough, 302  
Spas (Spaws), 2, 3, 4, 5, 6, 7, 12, 16,  
22, 24, 26, 27, 37, 40, 44  
" Aldfield, 61  
" Analysis, 61  
Spas, Askern, 237  
" Bibliography, 92  
" Boston, 237  
" Croft, 237  
" Europe, 97  
" Guisborough, 69  
" Handbook to, 138  
" Harrogate, 61, 78, 80, 82, 84, 97,  
105, 115, 131, 179, 223, 237,  
290, 309, 312  
" Ilkley, 237  
" " Analysis, 468  
" Knaresborough, 61, 65  
" Malton, 270  
" Mineral Waters, 309  
" Scarborough, 54, 62, 92, 98, 234  
SPEAR, J., 171  
SPEARS, —, 226  
SPEED, LANCELOT, 251  
Speeton, 35, 51, 56, 261, 328, 356  
" Ammonites, 378, 389  
" and Heligoland, 265  
" " Fossils, 256  
" Aporrhais at, 106  
" Belemnites, 353  
" " Deformed, 387  
" Black Rock, 249  
" Brachiopoda, 81  
" Cement Beds, 312  
" *Cestracion*, 473  
" Clay, 103, 118, 121, 225, 243,  
289, 324, 325  
" " Aldborough, 433  
" " Allen on, 116  
" " Belemnites, 383  
" " Fauna, 298  
" " Foraminifera, 474  
" " Fossils, 288, 378, 402  
" " Judd on, 114  
" " Lamellibranchiata, 405  
" " Lamplugh on, 225, 287  
" " Leckenby on, 90  
" " *Leptolepis*, 380  
" " Mappleton, 432  
" " Nuculidæ, 184  
" " Pavlow on, 288  
" " Pavlow and Lamplugh,  
252  
" " Subdivisions, 225  
" Cliff, Map, 495  
" Cliffs, 190  
" " Zones, 277  
" Corals, 329  
" Crustaceans, 72, 99, 106  
" Displaced Chalk, 371  
" Echinoderms, 137  
" Entomostraca, 73  
" *Eurycormus*, 270  
" Fish Tooth, 327  
" Foraminifera, 140, 175, 212,  
229, 255

- Speeton, Fossil Fish, 87  
 „ Fossils, 297, 298, 305  
 „ Holaster, 215  
 „ *Ichthyosaurus*, 347, 348  
 „ Inocerami, 446  
 „ Kimeridge Clay, 348, 462  
 „ Lamellibranchs, 319, 397, 422  
 „ *Limæ*, 367  
 „ Madreporia, 318  
 „ Map, 479, 496  
 „ Neocomian, 297  
 „ Palæontology, 117  
 „ *Pectens*, 349  
 „ *Perisphinctes*, 394  
 „ Phosphatic Beds, 372  
 „ Red Chalk, 101, 118, 187, 229,  
 235, 327  
 „ Rostellariæ, 109  
 „ Series, Classification, 288  
 „ „ Lamplugh on, 287  
 „ „ Pavlow on, 288  
 „ Shell Bed, 169, 378, 385, 395,  
 432  
 „ Uitenage Series, 402  
 „ Zones, 301  
 SPEIGHT, E. E., 278  
 „ HARRY, 231, 235, 241, 245,  
 248, 253, 265, 268, 299,  
 308, 328, 338, 348, 357,  
 366, 375, 384  
 Speleology, 297, 415  
 „ Ingleborough, 277  
 SPENCE, J., 66  
 SPENCER, JAMES, 112, 122, 137, 146,  
 150, 171, 176, 194, 199,  
 208, 226, 242, 245, 253,  
 259, 278, 309, 318  
 „ JAMES, Obituary, 315  
 „ L. J., 318, 398, 404, 408, 418,  
 424, 432, 436, 444, 448,  
 454  
*Spencerites*, 307  
*Sphenophyllum*, Halifax, 279  
 „ *tricomatosum*, 251  
*Sphere*, 376  
 SPIELMANN, P. E., 384, 404  
 SPIERS, W., 226, 235  
 Spine of Fish, 158  
 Spined Myriapods, 208  
 SPINK, J., 289  
 Spinose Rhynchonellæ, 221  
 Spiral Body in Sponges, 79  
*Spirangium carbonarium*, 200  
*Spirifera*, Abnormal, 259  
 „ *lineata*, 259  
 Spirobis Limestone, 272  
 Spitsbergen, Glacial Geology, 303  
 „ Shelly Moraine, 452  
 Spofforth, Map, 498  
 SPON, —, 120  
 „ E., 141  
 Spon's Dictionary, 91  
*Spondylus gibbosus*, 340  
 „ *inflata*, 340  
 „ *latus*, 340  
 Sponge, Carboniferous, 285  
 „ Gravels, Faringdon, 353  
 Sponges, Calcareous Grit, 232  
 „ Catalogue of, 179  
 „ Danes' Dyke, 296  
 „ Fossil, 79, 205, 214  
 „ Freshwater, 329  
 „ Jurassic, 257  
 Sporangia of *Stauropteris oldhamia*, 374  
 Spores in Carboniferous, 195  
 „ Fossil Fern-Sporangium, 364  
 „ of Jurassic Ferns, 445  
*Sporocarpion ornatum*, 354  
 Springs, Analyses, 175  
 „ Easingwold, 75  
 „ Gipsy, 193  
 „ Harrogate, 83, 313, 367  
 „ Hornsea, 456  
 „ Hovingham, 75  
 „ Malham, 165  
 „ Mirfield, 215  
 „ Origin of, 395  
 „ Sheffield, 93  
 Sproatley, Map, 500  
 Sprotborough Boulders, 302  
 Spurn, 22, 26, 30, 271, 298, 328, 365,  
 473  
 „ Breach at, 73  
 „ Cordeaux on, 182  
 „ Early History, 206  
 „ Erosion, 155, 302, 304  
 „ Fossil Plants, 170  
 „ Growth, 359  
 „ Point, 183, 198  
 „ „ Changes in, 359  
 „ „ Erosion, 150  
 „ „ Magnetic Declination,  
 131  
 „ „ Map, 477, 501  
 „ „ Naturalists at, 182  
 „ „ Shap Granite, 222  
 SQUIRE, W., 217  
*Stachypteris Halleii*, 455  
 Staffordshire, 380  
 „ Keuper, 467  
 Stages in Chalk, 451, 458  
 Stainbro' Park, 476  
 Staincross, Boulders, 265  
 Staining of Rocks, 130  
 Stainmoor Common, Map, 492  
 „ Forest, Map, 492  
 Stainton Dale, 45  
 „ „ Map, 493  
 „ „ Map, 492  
 „ „ Woodhouse, Boulders, 409  
 Staithes, 199, 202, 304, 308, 370  
 „ Boulders, 306

- Staithes, Fossil Starfish, 68, 69  
 „ Iron Ore, 77  
 „ Lias Fossils, 304  
 „ Mammoth's Tooth, 323  
 „ Map, 485, 492  
 „ *Ophiolepis*, 166  
 Stalactitic Permians, 285  
 Stalagmite, Ingleborough, 134  
 „ Rate of Accumulation, 134  
 Stalybridge Waterworks, 430  
 Stamford Bridge, 463, 474  
 „ Map, 497  
*Standard*, 177  
 Standing Stones, 471  
 STANFORD, —, 465  
 „ E., 474, 476  
 Stanford's Atlas, 367  
 „ Geol. Atlas, 398  
 STANHOPE, MICHAEL, 2, 3, 13  
 „ W. S., 165  
 Stanley, 43  
 „ Shale, 65  
 STANLEY, S. S., 395  
 Stanley Victoria Colliery, Map, 488  
 STANSFIELD, ABRAHAM, 114  
 „ W. H., 444  
 STANTON, F. W. S., 418  
 Star-stones, 6  
 Starfish, Lias, 116, 211  
 Starfishes, Fossil, 65  
 STARK, J., 41  
 Startforth, Sanitation, 372  
 State of Large Towns, Report, 64  
 STATHER, A. J., 384, 412, 419, 432, 444, 454  
 „ J. W., 253, 255, 259, 268, 272, 273, 278, 279, 289, 293, 299, 308, 309, 318, 328, 329, 332, 338, 347, 348, 356, 357, 366, 375, 384, 385, 395, 396, 404, 410, 412, 419, 428, 429, 437, 438, 443, 444, 450, 455, 459, 463, 469, 473, 474  
 Statistics, Mines and Quarries, 310, 313, 319  
*Stauropteris oldhamia*, Sporangia, 374  
 Staveley, Boulders, 220  
 STEAD, J. E., 150, 155, 433, 435, 444  
 Steam Coal, 414  
 STEARS, J., 245, 289  
 STEAVENSON, A. L., 137, 253  
 Stebden Hill, *Temnocheilus*, 263  
 Steel Metallurgy, 457  
 STEINHAEUSER, H., 34  
 Stem of *Equisetites*, 460  
 „ *Lepidodendron*, 375  
 „ *Sigillaria*, 320  
*Stephanoceras subarmatus*, 267  
 STEVENSON, A. L., 176  
 STEVENSON, A. S., 192, 208  
 „ J. C., 103  
 „ R., 32, 33, 36, 37  
 „ W., 200, 268, 385  
 „ W. F., 66, 126  
 STEWARDSON, —, xxxi.  
*Sthenarosaurus dawkinsi*, 421  
*Stigmara*, Clayton, 220  
 „ *ficoides*, Bradford, 138  
 „ „ Clayton, 209  
 „ „ Monograph, 208  
 „ Unusual Type, 386, 397  
 Stigmarian Rootlets, Parasite of, 366  
 „ Roots, 187, 348  
 STILES, M. H., 329  
 Stillingfleet, Map, 499  
 Stillington, Boulders, 222  
 „ Map, 485, 496  
 Stinking Well, 12  
 STIRRUP, MARK, 230, 235, 345, 269, 357  
 Stittenham, Map, 486  
 STOBBS, J. T., 366, 371, 375, 380, 385  
 STOCK, T., 155  
 „ W. F. K., 220, 226, 253  
 Stockdale Shales, 216  
*Stockholm*, 429, 460  
 STOCKS, H. B., 192, 200, 208, 348  
 Stocks in Bowland, Map, 497  
*Stockton*, 24, 45  
 Stockton, 45  
 „ on Tees, 24  
 „ on the Forest, Map, 497  
 „ Water, 168  
 STOKES, C., 55  
*Stokesby and Ingleby Greenhow Magazine*, 371, 391  
 Stokesley, Map, 479, 481, 492  
 „ Peat at, 323  
 STOLTERFORTH, H., 186  
*Stomatopora*, Cornbrash, 260  
*Stomatopora smithi*, 274  
 Stone Age, 418  
 „ „ Antiquities, Guide, 345  
 „ Analyses, 350  
 „ and Ore Mining, 426  
 „ Axes, Borrowdale Ash, 442  
 „ Coal, 331, 430  
 „ Dressing, Bradford, 136  
 „ for Houses of Parliament, 57, 59  
 „ Halifax, 227  
 „ Implements, 114, 128, 293  
 „ „ Barnsley, 201  
 „ Mining, 263  
 „ Quarrying, 358, 411  
 „ „ and Preparation, 400  
 „ Resistance of, 85  
 „ Selby Abbey, 447  
 „ Trough Brewery, Halifax, Boring, 366  
 „ Weathering, 351  
 Stones in Fireclay, 357

- Stonesdale Moor, Map, 492  
 Stonyhurst, 270  
     " College, 264  
 STOPES, MARIE C., 385, 396, 405, 433,  
     464, 474  
 STORER, J., 32  
 Storm, Barden Fell, 411  
 Story of Coal, 287  
     " Earth, 278  
     " East Riding, 448  
     " Lincoln Gap, 282, 292  
     " Our Planet, 255, 301, 341  
 Stourhead, xxxiii.  
 Stourton, Iron Ore, 190  
 Stovin's Manuscript, 388  
 STRACHAN, JAMES, 455  
 Strafford, 42  
     " Main Colliery, Gas, 126, 145  
     " Main, Map, 487  
 STRAHAN, AUBREY, 200, 204, 208, 212,  
     217, 218, 230, 235, 332, 338, 375,  
     433, 456, 464, 479, 480, 492, 493,  
     494  
*Strand Magazine*, 331  
 Strange Phenomenon, Gormire, 64  
 Stranger's Guide to Boroughbridge, 68  
     " Ferriby, 60  
 STRANGWAYS, C. FOX-, 155, 289, 357  
     (See also Fox-Strangways, C.)  
 Strata, Ganstead, 289  
     " Halifax, 289  
     " Table of, 340  
 Strathearn, Clay, 285  
 Stratified Rocks, Constituents of, 124  
 Stratigraphical Classification, 391  
     " Geology, 306, 344, 408, 451  
 Stratigraphy, Coal Measure Mollusca  
     385  
     " Ingleborough, 344, 380,  
     392  
 Strawberry Pit, Map, 489  
 Street Pit, Map, 489  
 Strensall, Boring, 252  
     " Map, 497  
     " Water, 178  
 Streoneshalk, 34  
*Strepsodus sulcidens*, 330, 337  
 Striæ, Barton, 297  
     " Fawcett Quarries, 297  
     " Holwick Head, 297  
     " Non-Glacial, 406  
 Striated Pavement, Withernsea, 346  
     " Surface, Harden Moor, 391  
     " " Ribblesdale, 391  
     " " Sandsend, 348  
     " Surfaces, Shipley, 296  
 STRICKLAND, H. E., xxxi., 30  
 Strike Maps, 325, 335  
*Stromatopora smithi*, 264  
 Strontia, 33  
 Strontian, 29, 55  
 Strontites, 40  
 Strontium, Harrogate, 107  
     " Yorkshire, 196  
*Strophodus rigauxi*, Cornbrash, 207  
     " Teeth, Malton, 439  
 Stroud, 86  
 STRUCKMANN, C., 168, 171  
 Structural, etc., Geography, 400  
 Structure, *Araucarioxylon*, 337  
     " *Calamites*, 265  
     " Calcareous Grit, 74  
     " Carboniferous Ferns, 243,  
     258, 383  
     " Carboniferous Plants, 389  
     " Cleveland, 114  
     " Coal, 193, 447, 457  
     " Coal Plants, 113, 127  
     " Coalfields, 92  
     " Craven Limestones, 397  
     " Dictyoxylons, 130, 132  
     " Fossil Plants, 138, 307  
     " Ganoid Fishes, 129  
     " Jet, 337  
     " *Lagenostoma lomaxi*, 364  
     " Leaves of *Calamites*, 275  
     " *Lepidodendron*, 169  
     " Limestones, 397  
     " Marls, 78  
     " *Matonia pectinata*, 317  
     " Millstone Grit, 90, 213  
     " Mountain Limestone, 350  
     " Palæozoic Plants, 337, 346  
     " " Seeds, 394  
     " *Porosphaera*, 362  
     " Rocks, 160, 165  
     " " Quantitative Method,  
     404  
     " *Sigillaria*, 320  
     " *Solenopora*, 262  
     " Teeth and Scales, 72  
     " Yorkshire, South-East, 362  
 Student's Handbook, 451  
     " " Geology, 184, 251  
     " " Stratigraphical  
     Geology, 341  
     " Lyell, 286, 440  
     " Manual of Geology, 85  
 Studies, Fossil Botany, 324, 326, 403,  
     416  
     " Fossils, 474  
     " Scientific and Social, 329  
     " Water Supply, 460  
 Studley, 56, 58, 60  
     " Park, 33, 132  
     " Royal, 26, 54, 66  
 STUKELEY, W., 11  
 Stump Cross Caverns, 134  
 STUR, D., 226, 235  
 Sturgeons, Fossil, 237  
 STUTCHBURY, S., 63  
*Stuttgart*, 84, 139, 207, 288



- STYLE, GEORGE, 357  
 Sub-aqueous, Boulder Clay, 276  
*Subclymenia*, 283  
 Subdivisions, Carboniferous, 295, 314  
     " Chalk, 180  
     " Inferior Oolite, 93  
     " Speeton Clay, 225  
 Submerged Boulder Clay, Humber, 463  
     " Coasts, 349  
     " Forest, Holmfirth, 144; 145  
     " " Hull, 135  
     " " Redcar, 152, 366  
     " " 63, 91, 462  
 Submergence, 267  
     " Glacial, 251  
     " Great, 292  
     " E. Hull on, 266  
 Subsidences, Hartlepool, 167  
     " Permian, 173  
     " Ripon, 167  
 Subsoil Waters and Typhoid, 349  
 Subsurface Water, 397  
 Subterranean Caves, 300  
     " Streams, Ingleborough, 231  
     " Watersheds, Cleveland, 253  
 Succession, Bernician, 444  
     " Carboniferous, 403, 438, 460  
     " Coal Seams, 58  
     " Yoredales, 338  
 SUDDABY, J., 375  
 SUESS, E., 109  
 Suffield, Brachiopoda, 287  
 Suffolk, Boulder Clay, 344  
     " Glacials, 426  
 Sugden End Overflow Valley, 446  
 SUGDEN, S., 122  
 Suggestions for Research, 363  
 Sulphate of Strontian, 55  
 Sulphur Baths, 26  
     " Springs, Harrogate, 63, 183, 217  
     " Waters, 118, 150, 160, 170, 185, 238  
     " " Askern, 229  
     " " Harrogate, 94, 119, 229  
     " Wells, 4, 5, 12, 20, 22  
     " " Harrogate, 54  
     " " History of, 146  
 Sulpurea Harrowgatensi, 18  
*Summary of Progress, Geol. Survey*, 341, 343, 345, 350, 354, 359, 368, 376, 378, 385, 400, 402, 405, 422, 426  
 SUMMER, E. J., 396  
 SUMMERFIELD, R. A., 210, 218, 220, 226  
 Sunk Island, 26, 76, 179, 320  
 Sunk Island, Boring, 80  
     " " Map, 501  
 Sunset Hole, 431  
 Superficial Deposits of Aire, 91  
 Supracoralline Beds, 135, 154  
 Surface Features, Origin, 296  
     " Geology, 151, 156  
*Surtees Society*, 121  
 Survivals, Glacial, 390  
 Sussex, Fossil Flora, 462  
 SUTCLIFFE, —, 389  
     " F. W., 226  
     " J., 33  
     " R., 299, 357  
 Sutton, Boulders, 268  
     " in Holderness, History, 281, 320  
     " Moor, 157  
     " on Derwent, Map, 498  
     " on the Forest, Map, 496  
 SWAIN, W. T., 259  
 SWAINE, A. T., 464  
 Swaine, Map, 487  
 Swaithe, Map, 487  
 Swale Valley, Scenery, 299  
 Swaledale, 28, 47, 239, 241, 242, 301  
     " Boulders, 308  
     " Carboniferous, 401  
     " Cave, 87  
     " Geology, 231  
     " Map, 97, 493  
     " Mineral Veins, 97  
     " Ostracoda, 276  
     " Swallow Holes, 121  
     " *Woodocrinus*, 193  
 Swallow Holes, 126, 173  
     " " Craven, 184  
     " " Formation, 121  
     " " Ingleborough, 184  
     " " Ripon, 157  
     " " Swaledale, 121  
 Swanland, *Actinocamax plenus*, 375  
     " Boulders, 280, 298  
 Swarth Fell, Millstone Grit, 336, 346  
     " " Silicified Plant Seam, 336  
 Sweet Spaw, 4, 5, 12, 14  
 SWEETING, R. D., 419  
     " R. D. R., 192  
 Swillington Bridge Boring, Map, 489  
 Swine, 40  
     " Boulders, 267, 270  
     " Rhomb Porphyry, 288  
 Swinefleet, Map, 501  
 Swinsto Cave, 436  
 Swinton, 56, 58, 60  
     " Map, 478, 486, 502  
     " Park, Map, 487  
 SWITHENBANK, J. W., 348  
*Sycocrinus*, 465, 467  
 Syenite, 38

- SYLER, C. A., 391, 396  
 SYMONS, B., 405  
 Synopsis of Palæozoic Rocks, 83  
 System of Glacier Lakes in Cleveland,  
     344  
 Table of Fossil Fishes, 65  
     " Sedimentary Rocks, 136  
     " Strata, 32, 340  
 'Tableau de Terrains sédimentaires,'  
     136  
 Tabular Hills, Valleys in, 74  
*Tabulipora debilis*, 452  
     " *multitabulata*, 452  
 Tadcaster, 41, 343, 359  
     " Map, 498  
     " Permians, 120  
     " Stone, 447  
     " Trias, 120  
 TAIT, M., 215, 218  
 Tanfield, 282, 466  
     " Boulders, 220  
 TANSLEY, A. G., 444  
 Tarn, Giggleswick, 98  
     " Malham, 323  
 TATE, A. N., 218, 226  
     " R., 106, 109, 120, 129, 143, 146,  
         160, 165, 166  
     " RALPH, Obituary, 341, 349  
     " T., 146, 188, 192, 218, 235, 242,  
         245, 253, 260, 269, 279, 289,  
         299  
     " THOMAS, Obituary, 294, 302  
 Taunton, 448  
 TAYLOR, H., 83  
     " JOHN, 2  
     " J. E., 150, 192  
     " JOHN W., 420, 433, 444, 474  
     " W. C., 44, 46  
 TEALE, THOMAS PRIDGIN, 59, 86, 91,  
     427, 433  
 TEALL, J. J. H., 165, 186, 200, 208,  
     218, 298, 299, 405  
 Tebay, 450, 472  
     " Geology of, 218  
     " Memoir, 127  
 Tees, 348  
     " Bar, 238  
     " Basin, Vegetation, 363  
     " Development of, 273  
     " Map, 485  
     " Marshes, 207  
     " Valley, 185, 283  
     " " Geology of, 297  
     " " Peat, 398  
 Teesdale, 43, 301, 355, 361  
     " Carboniferous, 147, 148, 149,  
         152  
     " Caves, 436  
     " Contact Rocks, 276  
     " Drift, 62  
 Teesdale, Geology of, 310  
     " Glacials, 249, 343  
     " High Force, 143  
     " Lamprophyres, 249  
     " Limestone, 351  
     " Ostracoda, 276  
     " Place-Names, 204, 213  
     " Quartzites, 249  
     " Shells, 216  
     " Silurians, 154  
     " Upper, 221, 222, 281  
     " Volcanoes, 292  
     " Whin Sill, 151, 162  
     " Yoredales, 343  
 Teeth, Cochliodonts, 112  
     " *Diplopodia*, 473  
     " Structure of, 72  
 Teleosaur, Whitby, 165  
*Teleosaurus chapmanni*, 41, 63  
     " *eucephalus*, 165  
 Teleostean Remains, 163  
*Temnocheilus coronatus*, 263  
 Temperature of Springs, 93  
 TENNANT, J., 70  
     " SMITHSON, 25  
*Terebratula gesneri*, 219  
     " *sarthacensis*, 359  
*Terebratulina substriata*, 254  
 Terminal Moraines, 207, 216  
 'Terra Nova' Expedition, 473  
 Terraces, 145  
     " Habitation, 207  
     " Origin of, 148  
 'Terrains Stratifiés,' 124  
 Terrestrial Magnetism, 122  
 Terrington, Map, 486  
 Tertiary Brachiopoda, 134  
     " Bridlington, 53, 71  
     " Corals, 128  
     " Crag, 57  
     " Dykes, Cleveland, 214  
     " Entomostraca, 133  
     " Marls, Structure of, 78  
     " Mollusca, 78  
     " Succession, 195  
 Testacea, 55  
 TEW, T. W., 122, 180  
 Text-Book, Fossil Plants, 431  
     " Geology, 174, 190, 193,  
         352, 472  
     " Geology, Geikie, 256  
     " Harrison, 294  
     " Lapworth, 315  
     " Palæontology, 465  
     " Petrology, 411  
 Texture of Igneous Rocks, 460  
 Thackley, 188  
 Thallium, Whitby, 106  
 THEAKSTON, S. W., 61, 93  
*Thecidea*, Yorkshire, 254  
 THELWALL, T., 269

- Theories, Glacial, 273  
 Theory of Coal Formation, 389  
     Schillerization, 198  
 'Therapeutics of Mineral Springs,' 367  
 Thermal Waters, General, 54  
 Thermometrical Observations, 236, 254  
 Thickening of Beds, 137  
 Thill, Dislocations in, 145  
 Thinning Out of Coal, 273, 283  
 Thirkleby Park, 201  
 Thirsk, 36  
 Thirsk, 36, 48, 90  
     " Boulders, 247, 260  
     " Earthquake, 398  
     " Map, 479, 481, 494  
     " Water, 156, 303  
 Thixendale, Chalk Fossils, 189  
 THOMAS, H. H., 420, 444, 445, 447, 455  
     461, 464, 475  
     IVOR, 475  
 THOMPSON, C., 375, 420, 426, 428, 433,  
     438, 445, 464, 475  
     " G. R., 420  
     " R. D., 54  
     " S. P., 235, 245  
     " T., 37, 38, 40  
     " T. W., 260  
     " W. H., 246, 253, 329, 366  
 THORESBY, RALPH, 10, 47, 188  
*Thoresby Society's Publication*, 425  
 Thorncliffe Colliery, 271  
     " Colliery, Gas in, 124  
     " Geology of, 333  
     " Map, 487  
     " Seam, 267  
 Thorne, 389, 409  
     " Map, 477, 501  
     " Peat, 389  
 THORNE, T., 132  
 Thorner, 476  
     " Landslip, 162  
 Thornhill Colliery, 291  
 Thornton, 389, 421  
     " Map, 490  
     " in Craven, Map, 478, 498  
     " in Lonsdale, Map, 495  
     " le Moor, Boulders, 222  
 Thornwick Bay, 179  
 Thorp Basset, Map, 496  
 THORP W., 476  
 Thorparch, 16, 20, 35  
 THORPE, —, 238  
 Thorpe, Cave, 224, 233  
 THORPE, J., 109  
     " T. C., 154, 155  
     " T. E., 146, 167, 169, 171, 172  
     234, 235, 244, 245  
 THORPE, W. and THORP, W., 59, 60, 62,  
     64, 70, 72, 78, 84, 476  
*Thracia phillipsi*, 422  
 Thrapston, 260
- THRESH, J. C., 289, 338, 366  
 Threshfield, Carboniferous, 401  
     " Fossil Plants, 387  
 Thrusting, Horizontal, 312  
 Thryberg Hall Colliery, 164  
     " Map, 487  
 'Thunderbolts,' 454  
 TICHBORNE, C. R. C., 179, 180  
 TICKELL, J., 24  
 Tickhill, 42  
     " Glacials, 378, 389  
     " Map, 477, 502  
 Tidal Estuaries, Bars, 236  
     " Harbours Commission, 68, 69  
     " Rivers, 145, 260  
     " Waters, 171, 320  
 TIDDEMAN, R. H., 115, 127, 129, 131,  
     132, 139, 141, 146, 151, 155, 160,  
     216, 218, 222, 226, 230, 235, 236,  
     242, 243, 245, 247, 248, 252, 253,  
     272, 279, 309, 329, 338, 475, 478,  
     479, 480, 482, 486, 493, 495, 496,  
     497  
 Tides and Waves, Manual, 386  
     " North Sea, 397, 405  
 TIDY, —, 221, 226  
 TIFFIN, J. H., 186, 188  
 Tiger, 37  
*Tiltoniceras costatum*, 468  
 Time, Geological, 370  
*Times*, 149, 230, 233  
 TIMPERLEY, J., 66  
 TINDALL, —, 142  
     " E., 10, 89, 93, 96, 103, 122  
     " J., 129, 144, 146  
 Tingley, Fossil Fish, 163, 339  
 Tinsley Colliery, Section, 124  
     " Park Colliery, 238  
     " Map, 487  
 Tithonian, 297  
 Toarcian Beds, 449  
 TOBEY, H., 385  
 Tockwith, Map, 498  
 TODD, C. R., 49, 62  
*Todites Williamsoni*, 445  
 Todmorden, 321  
     " Bloomary, 161  
     " Boulders, 272, 276  
     " Excursion to, 97  
     " Flints, 180  
     " Fossils, 60  
     " Map, 478, 484, 500  
 Toftshaw, Labyrinthodont, 121  
 Toll Bar, Map, 489  
 Tom Royd's House, Map, 489  
 TOMES, R. F., 180, 318, 329  
 TOMLINSON, C., 93, 94, 96, 254  
     " JOHN, 208  
 Tong, Erratics, 203  
     " Map, 490  
 TONGUE J., 385, 396

- TONSTALL, G., 5, 6  
 TOOKE, A. W., 55  
 Tooth in Red Chalk, 327  
 Topcliffe, 36, 403  
     " Boulders, 259  
     " Map, 495  
 TOPLEY, W., 109, 137, 149, 151, 215, 218  
 Topographers, Lives of, xxxiii.  
 Topographical Dictionary, 72  
 Topography, Books on, xxxii., xxxiii.  
     " Howgill Fells, 414  
     *Toronto*, 464  
 TORRELL, O., 218  
 Totley Tunnel, 133  
 Tour in Dales, 229  
     " Wharfedale, 91  
     " Yorks. Dales, 320  
 Tourist's Guide, 152  
     " " to Harrogate, 54, 55  
     " " to Ridings, 202  
     " " to West Riding, 147,  
         161, 177, 182, 221, 238, 262  
 Town Water Supply, 144  
 Towns, Distribution of, 292  
 TOWNSEND, C. F., 318  
     " J., 30, 32  
 Towthorpe, 308  
 Trachylite, Cleveland Dyke, 451  
 Trachytic Boulders, Kelsey Hill, 353  
 Tracks of Invertebrates, Carboniferous, 193  
 Tradition of the Flood, 277  
*Tragophylloceras loscombi*, 474  
 TRAIL, J. W. H., 318  
 Trails and Holes, 75  
*Trampf*, 423  
*Trans. American Phil. Soc.*, 34  
     " *Barnsley Nat. Hist. Soc.*, 184, 197, 205  
     " *Brit. Assoc. Waterworks Eng.*, 277, 329, 362, 368, 372, 390  
     " *Cambridge Phil. Soc.*, 41, 43  
     " *Canadoc and Severn Valley Club*, 434  
     " *Chesterfield Inst. Eng.*, 139  
     " *Cleveland Lit. and Phil. Soc.*, 113, 114, 116, 117, 118, 122  
     " *Clifton Coll. Sci. Soc.*, 127  
     " *Cumberland and Westmorland Assoc.*, 189, 204  
     " *East Riding Antiq. Soc.*, 389, 395, 463, 474  
     " *Eastbourne Nat. Hist. Soc.*, 173, 178  
     " *Edinburgh Geol. Soc.*, 298, 304, 313, 314, 370, 389, 448  
     " *Federated Institute Mining Eng.*, 225, 234, 235, 252, 274, 287, 282, 283, 284, 293, 303, 310, 312, 319  
     *Trans. Geological Soc.*, 33, 37, 41, 46, 48, 53, 55, 62  
     " *Glasgow Geol. Soc.*, 125, 133, 238, 243, 258, 283, 304, 424  
     " *Halifax Antiq. Soc.*, xxxiv., 437, 449  
     " *Herts Natural History Soc.*, 199  
     " *Historical Soc. Lancashire and Cheshire*, 106  
     " *Hull Geol. Soc.*, xxxi., xxxiv., 261, 262, 264, 266, 267, 268, 269, 270, 271, 277, 278, 279, 280, 281, 282, 288, 289, 290, 293, 295, 298, 299, 300, 301, 302, 306, 307, 308, 309, 321, 324, 325, 326, 327, 328, 329, 342, 345, 346, 347, 348, 351, 356, 357, 377, 378, 382, 383, 384, 385, 426, 429, 430, 431, 432, 433, 456  
     " *Hull Scientific and Field Nat. Club*, 301, 307, 316, 317, 327, 332, 335, 337, 346, 351, 364, 373, 389, 409, 418, 454, 462  
     " *Internal Congress Hygiene*, 248  
     " *Institute Mining Eng.*, 99, 385, 386  
     " *Institute Surveyors*, 137, 170, 179, 214  
     " *Iron and Steel Institute*, 116  
     " *Leeds Geol. Assoc.*, xxxiv., 188, 190, 194, 196, 197, 202, 203, 210, 212, 214, 221, 222, 223, 224, 226, 229, 230, 232, 236, 238, 239, 240, 241, 242, 243, 245, 246, 249, 251, 252, 253, 255, 256, 257, 258, 259, 260, 272, 273, 292, 295, 299, 300, 302, 305, 311, 312, 313, 315, 320, 322, 323, 324, 329, 377, 379, 380, 381, 382, 384, 406, 407, 408, 409, 410, 412, 413, 414, 418, 420, 421, 427, 428, 430, 432, 438, 439, 440, 442, 468, 470, 471, 475  
     " *Leeds N. and S. Soc.*, 250  
     " *Leeds Phil. Soc.*, 55  
     " *Leicester Lit. and Phil. Soc.*, 263, 361, 370  
     " *Linnean Soc.*, 120, 122, 183  
     " *Liverpool Geol. Assoc.*, 184, 185, 196, 236  
     " *Liverp. Geol. Society*, 203, 228  
     " *Manchester Geological Soc.*, 60, 63, 91, 97, 101, 108, 110, 120, 122, 125, 133, 134, 136, 140, 142, 145, 153, 158, 161, 166, 175, 176, 181, 183, 187, 189, 196, 198, 200, 213, 214,

- 216, 219, 229, 231, 233, 236,  
245, 254, 256, 260, 269, 273,  
283, 285, 291, 292, 293, 299,  
300, 314, 315, 318, 331, 339,  
342, 343, 357, 367, 385, 386,  
389, 390, 391, 396, 399, 414,  
430, 441, 452, 470, 471, 476  
*Trans., Manch. Micro. Soc.*, 350, 455,  
475  
,, *Midland Institute Eng.*, 121,  
124, 125, 126, 139, 145, 147,  
150, 151, 153, 161, 164, 204,  
214, 234, 267, 283, 293, 303  
,, *North England Institute Min.  
etc., Eng.*, 93, 128, 139, 145,  
176, 179, 180, 186, 198, 252,  
345, 401, 454  
,, *North Staff. Nat. F. Club*, 273  
,, *Northern Institute Mining, etc.,  
Eng.*, 76, 83, 86, 87, 91, 101,  
102, 104, 116, 121, 214, 342,  
389, 393, 394, 396, 399, 401,  
452  
,, *Northumberland, Durham, and  
Newcastle Nat. Hist. Soc.*,  
50, 192, 199, 220, 224, 228,  
262, 416, 444  
,, *Plymouth Inst.*, 126  
,, *Royal Dublin Soc.*, 175, 178,  
248, 286  
,, *Roy. Geol. Soc. Cornwall*, 65  
,, *Roy. Inst. Brit. Arch.*, 59  
,, *Roy. Irish Acad.*, 185  
,, *Roy. Soc.*, 217  
,, *Royal Society Edinburgh*, 31,  
214, 258, 286, 296, 306, 346,  
357, 401  
,, *Sanitary Institute*, 231  
,, *Sheffield Lit., Phil. Soc.*, 160  
,, *Society Arts*, 27  
,, *South Wales Inst. Eng.*, 101,  
102, 116, 122  
,, *South Yorks. Viewers Assoc.*,  
87  
,, *Surveyors' Inst.*, 386  
,, *Tyneside Nat. F. Club*, 88  
,, *Weardale Nat. F. Club*, 358,  
363  
,, *Yorks. Agric. Soc.*, 66, 70, 71  
,, *Yorks. Dialect Soc.*, 342  
,, *Yorks. Naturalists' Union*,  
xxix., xxx., 211, 221, 233,  
258, 286, 306, 326, 406, 407,  
409, 411, 412, 413, 414, 415,  
416, 417, 418, 419, 421, 439,  
444, 467, 468, 469, 470, 471,  
472, 473, 474, 475, 476  
Transported Lias, Filey, 412  
Trap Dykes, 41, 42, 43, 232  
,, Ingleton, 221  
,, Mica, 157, 241  
TRAQUAIR, RAMSAY H., 218, 338, 357,  
396, 420, 445  
*Traquaria*, Halifax, 162  
Travel of Sand and Shingle, 461  
TRAVIS, C. B., 396  
,, W., 23, 24, 27  
,, Cook, J., 230, 236, 409, 420  
Treatise on Bathing, 56  
,, Mining, 266  
,, Ores, 263  
,, Ore Deposits, 186  
,, Waterworks, 84, 128, 175  
TRECHMANN, C. T., 475  
Tree, Carboniferous, 246  
,, Forms of Coal, 130  
Trees, Ancient, 111  
,, Fossil, Wadsley, 148  
Trent, Development of, 273  
,, Evolution of, 392  
,, Ice-Flows, 469  
,, Fall, Map, 501  
,, Formation of, 406  
,, Past History, 282  
,, Valley, Glacials, 300  
,, Valley Problem, 406  
TREVELYAN, W. C., 43, 52  
Trias, 190, 211, 215, 232  
,, and Permians, Relations, 443  
,, Borings, 158  
,, Brachiopoda, 143, 152  
,, Committee on, 188  
,, Desert Conditions, 398  
,, Group, Sketch of, 100  
,, Origin of, 377, 393  
,, Physiography, 226, 229, 232, 234  
,, Sheffield, 428  
,, Tadcaster, 120  
,, Vale of York, 165  
,, Water, 144  
*Trichechus rosmarus* 337  
*Tricomanes rotundatum*, 45  
*Trigonellites whitbiensis*, 124  
*Trigonia clavellata*, Ornament of, 441  
,, *lingonensis*, 129, 140  
,, *literata*, 441  
,, Oldest, 129, 130, 131  
,, *signata*, 180  
*Trigoniæ*, 121  
,, Fossil, 150  
,, Monograph, 129, 136, 140,  
160, 180  
*Trigonocarpus Oliveri*, 394  
,, *Parkinsoni*, 394  
Trilobites, Carboniferous, 181, 187, 270  
316, 398, 421  
,, New, 466  
,, Millstone Grit, 471  
,, Monograph, 181  
*Trinucleus*, Norber, 453  
TROLLOPE, E., 91  
Trough Fault, Sheffield, 381

- Trough Pot Holes, 355  
 TRUSCOTT, S. J., 467, 475  
 Tubing Bore Holes, 98  
 TUKE, J., 21, 25, 59, 60  
 " J., Map by, 59  
 Tunnel, Blackhorn and Lydgate, 99  
 " Humber, 466  
 " Ribble Head, 205  
 " Saddleworth, 166  
 " Totley, 313  
 Tunstall, Map, 500  
 TURNBULL, J., 405  
 TURNER, —, 102, 103  
 " CHARLES, 475  
 " J. HORSFALL, xxxiv., 299  
 Turnerford, Map, 496  
 Tusk, Elephant, 37  
 " *Elephas*, Brough, 355  
 " " Holderness, 317  
 " Fossil, Bridlington, 384  
 TUTE, J. S., 110, 115, 122, 126, 132, 137  
 155, 160, 186, 200, 208, 218,  
 226, 236, 254, 260, 418, 420  
 " JOHN STANLEY, Obituary, 305  
 Twin Earthquakes, 369  
 'Two Thousand Miles in Wharfedale,'  
 359  
 TYLOR, A., 120  
 Tyne Basin, Vegetation, 363  
 " Valley, Glaciation, 343  
 TYNEDALE, W. G., 360, 366  
 Tyneside Naturalists' Field Club, 182,  
 192, 199, 220  
 Type Ammonites, 408, 422, 423, 424,  
 436, 448, 458, 465, 468  
 " Fossils, Cambridge, 245  
 " " Manchester, 255  
 " of *Pleuironautilus pulcher*, 378  
 " of *Pseudomelania vittata*, 413  
 Types of Boulders, 329  
 " Cephalopoda, 302  
 " Fossil Fishes, 117, 124  
 " Lamellibranchiata, 368  
 " Lias Bellemnites, 423  
 " Oolitic Lamellibranchiata,  
 376  
 " Scenery, 303  
 " Vegetation, 444  
 Typhoid and Water, 349  
 Ughill, Map, 482  
 Ugthorpe, Map, 492  
 Uitenhage Series, 402  
 Ulgill Rigg, Map, 492  
*Ulodendron*, Relationship of, 191  
 Ulrome, 270  
 " Lake Dwellings, 177, 183, 201,  
 234, 246, 247  
 " Map, 497  
 Un-Water-Worn Chalk-gravel, 185  
 Unaxial Augites, 450  
 Unconformability, Permians, 153  
 Unconformities, 370  
 Unconformity, Trias and Permian, 232  
 Underbank Trenches, 386  
 Underclays, Petrology of, 468  
 Undercliffe Quarry 358  
 Underground Mountains, 234  
 " Stream, Clapham, 377  
 " Streams, Malham, 377  
 " Temperature, 199  
 " Waters, 148, 153, 158,  
 163, 168, 174, 178,  
 196, 202, 231, 248,  
 263, 359  
 " Waters, Bibliography,  
 xxxi., 290  
 " " Channels, 296  
 " " Circulation of,  
 144, 240  
 " " Craven, 314, 332  
 " " Faults, 430  
 " " Ingleborough,  
 369  
 " " Lincolnshire, 248  
 " " Movements of,  
 343  
 " " Scarborough,  
 183  
 " " Supply.  
 " " Yorkshire, N.W.  
 321, 323, 324  
 343, 351, 360,  
 369, 370, 378  
 " " Yorkshire, West,  
 332  
*Unio distortus*, 52, 439  
 " *kendalli*, 439  
 Union Foundry, Map, 490  
 Univalves, Crag, 130  
 Unusual *Stigmara*, 386, 397  
 UPCOTT, WILLIAM, xxxiii.  
 UPHAM, WARREN, 227, 269, 279  
 Upheaval of Beds, 137  
 " Scandinavia, 296  
 Upleatham, Analysis of Iron, 124  
 " Brookite, 363  
 " Fossil Plants, 414  
 " Ironstone, Oldest Trig-  
 onia in, 129  
 " Map, 485  
 Upper Calderdale, 427  
 " Carboniferous, Relations of, 148  
 " Chalk, Beverley, 321  
 " Coal Measures, Yorkshire, 369  
 " Cow Close Pit, Map, 490  
 " Cretaceous, Memoir, 362  
 " Greensand, 324  
 " Helmsley, Map, 497  
 " Nidderdale, 194, 384  
 " Sandstone, Fossils, 62  
 " Swaledale, Geology, 231

- Upper Teesdale, 221, 281, 361  
 „ Wharfedale, 278, 328, 338  
 Upright *Equisetites*, 460  
 Upsall, Map, 485  
 Upton, Map, 482  
 „ Railway Sections, 178  
*Uptonia ignota*, 424  
 Urra, Map, 493  
 Uses of Peat, 387  
 „ Steam Coal, 414  
 USSHER, W. A. E., 236, 477  
 Utilization of Pennine Peat Moors, 364
- Vale of Clwyd Caves, 223  
 „ Mowbray, 376, 377, 398  
 „ „ Boulders, 363  
 „ „ Drift, 234  
 „ „ History of, 90  
 „ Pickering, 469  
 „ „ Boring, 441  
 „ „ Boulders, 299  
 „ „ Geology of, 325  
 „ „ Water Supply, 379  
 „ York, 48, 180, 362  
 „ „ Borings, 267  
 „ „ Erratics, 55  
 „ „ Glacials, 379  
 „ „ Glaciation, 206  
 „ „ Gravels, 62, 128, 352  
 „ „ Magnetic Disturbances, 234  
 „ „ Magnetic Survey, 80  
 „ „ Map, 266, 485  
 „ „ Moraines, 286, 324  
 „ „ Trias, 165  
 „ „ Water Supply, 379
- Valley Bottoms, Folds in, 360  
 „ Bradford Beck, 330, 339  
 „ Calder, 153  
 „ „ Drift, 142  
 „ Dent, Sedgwick, 109  
 „ Don, 160
- Valleys, Dry, 212  
 „ Gravels, 119  
 „ Formation of, 74, 81, 108, 115, 263, 402  
 „ near Kirkby Lonsdale, 105  
 „ Nidd, 99  
 „ Origin of, 126, 391  
 „ River, 283
- ‘Vallis Eboracensis,’ 75  
 Van Calker, see Calker, Van,  
 ‘Vanishing England,’ 376  
 Vanishing Village, 407  
 Variation in Coal Thickness, 139  
 „ Millstone Grit, 144
- VAUGHAN, A., 381, 385, 391, 396, 403, 405, 420, 433, 455  
 Vegetable Resin, 153  
 „ Structures, Halifax Coal, 124
- Vegetation and Geology, 384  
 „ Carboniferous, 236  
 „ Cleveland, 418  
 „ Disused Quarries, 393, 403, 414  
 „ Geographical Distribution, 356, 363  
 „ Types of, 444  
 Végétaux Fossiles, 43  
 ‘Végétaux Houillers,’ 440  
 Veins, Brecciation, 437  
 „ Lead, 178  
 „ Mineral, 114, 119, 121  
 „ Thrusting in, 312
- VEITCH, W. Y., 171, 186, 200, 210, 218, 242, 245, 279, 289, 318, 338, 396, 410, 420, 421  
 VELLACOTT, C. H., 455  
 Ventilation, 113  
 Ventriculidæ, Chalk, 70  
 Vermiform Fossils, 88, 90  
 VERNON, ROBERT DOUGLAS, 421, 464  
 „ W., 42  
 „ W. V., 46, 47  
 VERNON-HARCOURT, F. L., 200  
 Vertebrata Fossils, Catalogue, 237  
 Vertebrate Palæontology, 310  
*Vetacapsula*, 462, 472  
 VETCH, J., 73  
 Victoria and Park Farm Colliery, 291  
 „ Cave, 66, 124, 129, 130, 131, 132, 134, 141, 146, 148, 150, 151, 155, 160, 213, 223, 250, 266, 304, 351, 399  
 „ Cave, Contents, 92  
 „ Colliery, Boring, Map, 488  
 „ „ Map, 489  
*Victoria History*, 392, 393, 394, 448, 452, 453, 455, 466  
 Victoria Mill, Map, 488  
 „ Pit, Map, 489, 490  
 View of Dropping Well, 457  
 VILLEY, FRANCIS, 421, 445  
 VINE, G. R., 146, 151, 160, 166, 171, 176, 180, 181, 187, 193, 200, 227, 236, 245, 260  
 ‘Vitriolic’ Spring, Hornsea, 456  
 VIVARES, F., 457  
 VOGT, J. H. L., 467, 475  
 Volcanic Ash, Borrowdale, 300  
 „ Bomb, 223  
 „ Rocks, 345  
 „ „ Sheffield, 428  
 Volcanoes, Ancient, 292, 294  
 „ British, 283  
 „ Carboniferous, 198  
 „ Teesdale, 292  
 ‘Volga Beds,’ 225  
 Voyager Metallurgiques, 18, 19, 20

- Waddington, Map, 498  
 WADE, A., 396  
 " H., 176  
 Wadsley, Fossil Forest, 141, 148, 365  
 " Map, 502  
 Wadsworth Moor, Fossil Fish, 318  
 " Moor, Map, 499  
 " Woods, 240  
 WAGER, MORTON E., 426, 434  
 Waghen, Map, 499  
 WAINWRIGHT, J., 42  
 WAITE, E. R., 254, 260  
 Wakefield, 362  
 Wakefield, 29, 34, 43, 350  
 " Boulders, 256, 260  
 " British Dagger at, 91  
 " Cannel Coal, 163  
 " Carbonicola, etc., 275  
 " Coal Plants, 261  
 " Geology of, 159  
 " Map, 477, 483, 488, 500  
 " Underground Heat, 199  
 WALBRAN, J. R., 33, 60, 62, 66, 70, 74,  
 84, 86, 98, 126  
 WALCH, Miss E. G., 445, 446  
 WALCOTT, MACKENZIE, E. C., 96  
 Wales Common, Map, 502  
 Waleswood Colliery, 291  
 WALFORD, EDWIN A., 348  
 WALKER, ADAM, 19  
 Walker Collection, 407  
 WALKER, J., 18, 20, 50, 122  
 " J. F., 141, 149, 151, 212, 219,  
 221, 227, 254, 260  
 " JOHN FRANCIS (Obituary),  
 386  
 " J. K., 57, 60  
 " T. D., 44, 52  
 Walkington, 261, 280  
 " Map, 499  
 ' Walks Around Bradford,' 231  
 WALLACE, A. R., 260, 329  
 WALLER, J. W., 366  
 " T., 171  
 WALMSLEY, LIONEL, 465, 475  
 Walrus, Fossil, 337  
 " in Holderness, 365  
 Walsden Valley Millstone Grit, 161  
 WALTON, F. F., 200, 208, 219, 269, 279,  
 290, 300, 309, 329, 348, 357  
 WARD, J., 122, 154, 155, 385  
 " J. C., 118, 120, 123, 125, 126,  
 130, 139, 141, 477, 478, 479,  
 483, 484, 486, 488, 490, 491,  
 497, 498, 499, 500, 501, 502  
 " T., 200  
 WARE, A., HIBBERT, 445  
 WARING, E. J., 155, 160  
 Warp, 89, 93  
 " Analyses, 145  
 " Source of Humber, 339  
 Warping, 67  
 Warter, Map, 498  
 Warwick Nat. Hist. Soc. Reports, 138  
 Wasdale Crag Boulders, 105  
 Wash-out in Barnsley Coal, 164  
 ' Wash-outs in Coal Measures,' 373  
 Washburn, 263  
 Wassand Boulders, 316, 326  
 Waste of Land, 98, 146  
 " " Humber, 119  
 Water, 356, 360, 362, 386, 397  
 Water, Analyses, 132, 134  
 " Analyses, Hull and York, 138  
 " and Typhoid, 349  
 " and Water Supplies, 289, 338  
 " Ben Rhydding, 92  
 " Borings for, 240  
 " Chalk, 302  
 " Coal Strata, 91  
 " Dale, Map, 486  
 " Divining, 456  
 " Hull, 95, 138, 255  
 " Iron Deposit in, 316  
 " Line in Chalk, 325  
 " Manchester, 476  
 " or Ice, 371  
 " Pontefract, 248  
 " Purification of Chalk, 360  
 " Science of, 335  
 " Subsurface, 397  
 " Supplies, 141, 168, 174, 186,  
 209, 214, 277, 340, 366  
 " Supplies, Analyses, 171  
 " Supplies, Wells, 309  
 " Supply and Geology, 390  
 " " Ansted on, 152  
 " " Atlas of, 167  
 " " Bradford, 135, 221  
 " " Chalk, 160, 316  
 " " Commission on, 116  
 " " De Rance on, 153  
 " " East Yorks., 306, 375,  
 379  
 " " Filey, 385  
 " " Geology of, 435  
 " " Goole, 315  
 " " Great Britain, 138  
 " " Greensand, 316  
 " " Harrogate, 303  
 " " Hellifield, 170  
 " " Holderness, 375  
 " " Hornsea, 375  
 " " Hull, 317, 368, 375  
 " " Leeds, 170  
 " " Malton, 231, 258  
 " " New Red Sandstone,  
 362  
 " " Newton on Ouse, 362  
 " " North-East Yorks.,  
 390  
 " " Norton, 358



- Water Supply, Ripon, 303  
 " " Rotherham, 420  
 " " Scarborough, 231  
 " " Studies in, 460  
 " " Thirsk, 156, 303  
 " " Trias, 100  
 " " Underground, 324  
 " " Vale of Pickering, 379  
 " " Vale of York, 379  
 " " Watering Places, 156  
 " " Yorks., 303  
 " versus Ice, 295  
 " we Drink, ' 95  
 " York, 138  
 " York, Analyses, 188  
 Waterfall, Gordale Scar, 344  
 Waterfalls, 201  
 Watering Places, 71  
 " " Inland, 237  
 " " of England, ' 80  
 " " Water Supply of, 156  
 Waterloo Main Colliery, Map, 490  
 WATERS, A. H., 187  
 Waters, Acidity in Moorland, 320  
 " Bradford, 452  
 " Knaresborough, 282  
 " Moorland, 311, 331  
 " Movement of Underground,  
 360  
 " Underground, 153, 202, 248,  
 351  
 Watersheds, Cleveland, 253  
 Waterspout, Langtoft, 249, 252, 306,  
 323, 333, 363  
 Waterspouts, Wolds, 249, 332  
 Waterworks, Ashton-under-Lyne, etc.,  
 430  
 " Beverley, 402  
 " Cayton, 117  
 " Langsett, 318  
 " Little Don Valley, 367  
 " Oldham, 219  
 " Sheffield Corporation, 318  
 " Statistics, 169  
 " Treatise on, 84, 128, 175  
 Wath Main Colliery, 300  
 " Map, 495  
 Wath-upon-Deerne, Map, 502  
 WATNEY, Miss G. R., 434, 445, 446  
 WATSON, D. M. S., 396, 405, 421, 434  
 " J., 96  
 " JOHN, 445  
 " R., 20, 21, 22  
 WATTAM, W. E. L., 476  
 WATTS, ARTHUR, 421  
 " W., 166, 176, 181, 219, 220,  
 227, 236, 254, 260, 269,  
 300, 318, 329, 338, 386,  
 397  
 " W. M., 151  
 " W. W., 269, 290, 300, 306, 309  
 318, 329, 330, 339, 348,  
 357, 366, 375, 421, 434,  
 436, 442, 445  
 Waves, Cornish on, 425  
 " Manual of, 386  
 Wawne Boulders, 354  
 WAY, J. T., 66, 68  
 Wealden, 297  
 " Age of, 324, 335  
 " Floras, 462, 473  
 Wear Basin, Vegetation, 363  
 Weardale, 301  
 " Glaciation, 343  
 ' Wearing Down of Rocks, ' 469  
 WEATHERHEAD, W., 58  
 Weathering, Building Stone, 351  
 " Ironstone, 113  
 " Limestone, 231  
 " Magnesian Limestone, 345  
 " Stone, 351  
 Weaverthorpe, Map, 496  
 WEBER, F. P., 290, 309, 397  
 " H., 138, 142, 176, 267, 269,  
 290, 309, 348, 397  
 ' Week's Holiday, ' Settle, 146  
 WEISS, F. E., 348, 366, 372, 375, 386,  
 397, 446, 455  
 WELCH, Miss E. G., 434  
 Weldon, Limestone, 67  
 Weldrake, Map, 498  
 Well, Alum, at Harrogate, 168  
 " Giggleswick, 321, 351, 359, 396,  
 408  
 " Map, 494  
 " Masham, 150  
 " Sections, 240  
 " " Middlesbrough, 300  
 " " West Riding, 300  
 WELBURN, E. D., 318, 319, 326, 329,  
 330, 337, 339, 346, 348, 349, 357,  
 366, 386, 397  
 Wellhouse Foundry, Map, 490  
 ' Wellington Bridge, ' Building of, 66  
 Wells, 126  
 " Boring, 141  
 " Driffeld, 141  
 " Harrogate, 72  
 " Northallerton, 168, 174  
 " of Europe, 118  
 WELLS, ROBERT, 98  
 Wells, Spa, 473  
 " Water Supplies, 309  
 Welton, 60  
 " Map, 500  
 " Vale, 219  
 Wenlock and Ludlow, Sedbergh, 252  
 " Settle, 252  
 Wensleydale, 45, 185, 194, 210, 220,  
 230, 301, 302, 430  
 " Carboniferous, 196, 428  
 " Zones, 274

- Wensleydale, Fish Remains, 135, 183,  
380  
" Fossil Worms in, 74  
" Fossils, 90  
" Geology of, 247  
" Guide, 380  
" History of, 83  
" Labyrinthodonts, 183  
" Map, 481, 485  
" Prehistoric Remains, 205  
" Section of, 313  
" Yoredales, 135, 136  
Wentworth Colliery, Map, 489  
" Map, 482  
*Wernerian Society*, 51  
WESLEY, JOHN, 14, 15, 64  
*Wesley Nat.*, 201, 203, 206, 226  
*Wesleyan Methodist Magazine*, 15  
West Ardsley Coal and Iron Co., 124  
" Colliery, 101  
" Map, 489  
West Ayton, Excavations, 361  
" Bowling, Map, 490  
" Bretton, Map, 501  
" Clayton, Map, 488  
" Cowick, Water, 263  
" End Dye Works, Halifax, Boring,  
366  
" Hartlepool, Peat, 152  
" House, 460  
" Pit, Map, 489  
" Riding Boulders, 299  
" Riding Coalfield, Fish, 230  
" Colliery, 238  
" Map, 488  
" *County Council Vacation*  
*Courses*, 413, 418  
" Directory, 402  
" Excursion, 179  
" Geology of, 323, 361  
" Guide, 161, 182  
" Iron Industries, 140  
" Well Sections, 300  
WEST, T., 19, 30, 78  
West Tanfield, Map, 495  
WEST, W., 39, 43, 48, 68  
" WILLIAM, 102, 103  
West Yorks. Boulders, 219  
" Coalfield, 267  
" Colliery, Map, 489, 491  
" Dales, 451  
" Glaciation of, 159  
'West Yorkshire,' Davis and Lees,  
xxx., 153, 163  
West Yorks. Drift, 121, 126  
" Flora, 216  
" Iron and Coal Co., 291  
" Underground Waters, 332  
Westfield Lamb Bridge, Map, 491  
Westgate Hill, Boring, Map, 490  
" Map, 489  
WESTLAKE, E., 211, 219  
*Westminster Review*, 201  
Westmorland, 390  
" Note Book, 209, 212  
Weston, Map, 486, 496  
Wetherby, 29, 272, 333, 335  
" Map, 479, 498  
WETHERED, E., 193  
Wetwang, 239  
" Boulders, 402  
" Entrenchments, 222  
" Map, 497  
WEYMAN, G., 438, 446  
Wharfe, 46  
" Boulders, 150  
" Drift, 150  
" Map, 484  
Wharfedale, 212, 230, 359  
" Boulders, 148  
" Cave, 369  
" Geology, 126  
" Glacials, 263, 351, 360  
" Ice Age in, 391  
" Lower, 347  
" Map, 484, 485  
" Millstone Grit, 434  
" Scenery, 328  
" Stream, Diversion of, 391  
" Tour in, 91  
" Upper, 278, 328, 338  
Wharnccliffe, 355  
" Map, 482  
" Silkstone, 246  
" Colliery, 301  
" Map, 487  
" Woodmoor Colliery, 291  
Wharram, Millepore, 274  
Wharram-le-Street, Map, 497  
Whaston, Boulders, 304  
WHEATEAR, WILLIAM, 191, 193  
Wheatley Valley, 137  
" Wood, Pit, Map, 488  
WHEATON, S. W., 358, 368, 375, 397  
Wheeldale, Lake, 383  
WHEELER, W. H., 236, 260, 290, 339,  
349, 386, 397, 404, 405  
Wheldale Colliery, 271  
" Map, 488  
WHELLAN, T., 82, 83, 86, 126  
Whernside, Map, 494  
" Millstone Grit, 467, 470  
" Moors, Map, 494  
WHEWALL, W., 70  
WHIDBOURNE, G. F., 171  
Whin Dyke, Ayton, 341  
" Cleveland, 116  
Whin Sill, 151, 162, 277  
" Augite, 198  
" Contacts, 305  
Whinstone, Bradford, 143  
" Hammer, 212

- Whinstone Quarries, 340, 349, 351,  
353
- Whiston, Map, 502
- WHITAKER, J., 110
- " T. D., 26, 30, 32, 154, 155
- " W., 141, 142, 181, 200, 290  
300
- Whitaker's 'History of Craven,' 154,  
156
- Whitby, xxxiv., 38, 40, 41, 44, 47, 48,  
59, 93, 186, 475
- Whitby, xxxiv., 5, 6, 15, 16, 17, 18, 19,  
33, 34, 35, 37, 40, 47, 49,  
51, 117, 183, 188, 235,  
238, 295, 308, 370, 376,  
387, 408
- " Alom Works, 112
- " *Ammonite heterophyllus*, 120
- " Ammonites, 53, 88, 267, 408
- " and Pickering Railway, 52
- " Authors and their Publi-  
cations, xxxiv.
- " Boulders, 220
- " Coast Erosion, 374, 425, 473
- " Cliffs, 244
- " Concretion, 288
- " Crocodilia, 54, 193
- " Esk, 96
- " Ferns, 455
- " Footprints, xxxv., 399
- " Fossil Fish, 54, 75, 124, 246,  
290, 326
- "    " Plants, 442, 462
- "    " Wood, 52
- " Fossils, 56, 110, 249, 439
- " Geology, 59, 174, 221, 475
- " Glacials, 274, 284
- " *Gyrosteus*, 237
- " Harbour, 69
- " *Ichthyosaurus*, 216, 263
- " Ironstone, 85
- " Jet, 133, 209, 400
- 'Whitby Lias,' 127
- "    " Fishes, 300, 319
- "    " Fossils, 124
- "    " Reptiles, 185
- " Lit. and Phil. Soc., 59, 77
- "    " History of,  
113
- " Magazine, 44
- " Map, 480, 481, 485, 492
- " Moors, Ironstone Smelting  
Furnace, 441
- " Museum, 110, 112, 434, 441
- " Oolite Plants, 441, 442
- " *Panorama*, 44
- " Picture of, 60
- " Plesiosaurus, 99, 288
- "    " Young, 208
- " Repository, 110, 111, 112, 113
- " Sanitation, 390, 400
- Whitby, Saurians, 51, 53, 59, 63, 72,  
105, 106, 165, 389, 421,  
434
- " Sketch of, '93
- " 'Snakestones,' 308
- " Teleosaur, 165
- " Thallium, 106
- " *Williamsonia*, 423
- White Chalk, 96
- "    " Foraminifera, 92
- "    " Lamplugh on, 286, 296
- "    " Memoir, 353
- WHITE, H. M., 367
- White Lee Colliery, Map, 489
- " Nab, 40
- White Rose*, 268
- WHITE, W., 89, 96, 115
- " W. HALL, 335, 339
- Whitehaven News*, 150
- WHITEHEAD, HENRY, 300
- WHITELEY, R. L., 193
- Whitestone Cliff, Map, 485
- WHITING, CHAS. S., 193
- Whitley, Map, 500
- WHITMELL, T. F., 476
- Whitwell, Map, 482
- Whitwood, 427
- " Colliery, Map, 488
- Whixley, 260
- " Diphtheria, 192
- Whorlton, Oak Beneath Drift, 411
- " History of, 410
- " Map, 485, 493
- " Moor, Map, 493
- " Shap Granite, 411, 457
- Wickersley, Map, 502
- Widdop, 331
- WIELAND, G. R., 405
- WIGGINS, J., 76
- Wigglesworth, 16
- Wighill, Boulders, 343
- WIGNER, G. W., 156, 170, 171
- Wike, Map, 490
- Wilberforce Museum, xxxv.
- Wilberfoss, Map, 498
- Wild Boar, 379
- " Duck Skull in Peat, 317
- WILD, GEORGE, 187
- WILDING, J., 236
- WILDRIDGE, T. TINDALL, 200, 246, 254
- WILKINSON, J., 386
- WILLCOCK, J., 137
- WILLEN, R., 21
- Willerby, Boulders, 317, 326
- " Chalk, 307
- " Map, 485
- WILLIAMS, E., 122
- " J. W., 36, 236
- " T. R., 269
- 'Williams v. Nicholson,' Removal of  
Shingle, 120

- WILLIAMSON, A. C., 290  
 „ JOHN, Biography of, 193  
 „ W., 63  
 „ WILLIAM CRAWFORD, 51,  
 54, 55, 56, 58, 70, 72,  
 83, 122, 127, 130, 132,  
 156, 166, 171, 181, 187,  
 193, 195, 206, 209, 216,  
 219, 227, 229, 236, 237,  
 254, 260, 269, 278, 280,  
 287, 288, 290, 329  
 „ W. C., Autobiography,  
 288  
 „ W. C., Biography, 462  
 „ WILLIAM CRAWFORD,  
 Obituary, 270, 278, 282  
 „ W. C., Palæontological  
 Work of, 254  
 „ W. C., Reminiscences of,  
 290  
*Williamsonia*, 196, 204, 307  
 „ *gigas*, 181, 405, 414  
 „ Nathorst on, 165  
 „ *spectabilis*, 423  
 WILLS, H., 127  
 WILLSON, B., 349  
 WILMORE, A., 386, 397, 421, 434, 455,  
 465, 476  
 WILSON, A., 332, 339, 348, 455  
 „ A. E., 171  
 „ ALFRED P., 446  
 „ E., 146, 160, 165, 166, 172,  
 219, 237, 250, 254  
 „ G. V., 434  
 „ J., 150, 151  
 „ J. E., 330, 339, 367, 434, 446,  
 456  
 „ J. H., 176  
 „ J. M., 231, 237, 309  
 „ J. W., 319  
 „ T., 91  
 WILTSHIRE, T., 89, 91, 98  
 „ THOMAS, Obituary, 358  
 WINCH, N. J., 32, 33, 37, 38  
 Wincobank, Macrospores, 146  
 Wind Gaps, Chiltern, 469  
*Windermere*, 82, 88  
 Windhill, Striated Surface, 296  
 Windy Bank, Map, 490  
 Winestead, Boulders, 260  
 „ Map, 500  
 WINGATE, W. J., 410  
 Wings of Insects, Coal, 343  
 WINN, R. G. ALLANSON, 350, 358, 367,  
 also see under Allanson-Winn.  
 'Winning of Coal,' 151  
 Winny Nab, 271  
 WINTER, R., 28  
 „ W. P., 434, 446  
 Winterburn Valley, 239, 242  
 Winterhill, Map, 487  
 Wintringham, Map, 486, 496  
 WISEMAN, W. R. B., 386, 397  
*Wiss. Ergebnisse der Schwedischn Süd-  
 polar Expedition*, 460  
 WITHAM, H., 42, 49, 51  
 Withernsea, 249, 257, 308, 328, 429  
 „ Boulder Clay, 374  
 „ Boulders, 276, 278, 328,  
 417, 431  
 „ Deer Remains, 308  
 „ Fish Remains, 336  
 „ History of, 87, 441  
 „ Landslip, 346  
 „ Mammoth Tooth, 368, 374  
 „ „ Tusk, 442  
 „ Map, 500  
 „ Peat, 308, 317, 346  
 „ *Perca*, 336  
 „ Reindeer, 346  
 „ Removal of Shingle, 120  
 „ Striated Pavement, 346  
 Withernwick, Map, 499  
 WITTIE, R., 4, 5, 6, 7  
 Wold Cottage Meteorite, 205, 222, 450  
 „ Escarpment, 309  
 „ Newton, 'Aerolite,' 282  
 „ Newton, Gypsey Springs, 272,  
 282  
 „ Newton, Map, 496  
 Wolds, 31, 401  
 „ Boulders, 267  
 „ Chalk, 132  
 „ Cloudburst on, 425  
 „ Entrenchments, 373  
 „ Foot of, 220  
 „ Geology of, 296  
 „ Glacials, 329, 338  
 „ Limestone, 67  
 „ Quartzite Pebbles, 365, 366,  
 385  
 „ Waterspouts, 249, 332  
 WOLLASTON, G. H., 480  
 Wombwell Main Colliery, 291  
 „ Map, 487  
 Womersley, Map, 500  
 'Wonders of Geology,' 56  
 Wood, *Dodoxylon*, 346  
 WOOD, E., 74, 83, 84, 88, 89, 91, 104  
 „ ETHEL M. R., 459, 462, 465,  
 469, 473, 476  
 „ J., 16  
 „ N., 86, 91, 98, 120  
 „ SEARLES V., 71, 78, 115, 128,  
 130, 166, 469  
 „ S. V., JUN., 103, 123, 127, 130,  
 135, 137, 151, 156, 177  
 „ W., 300  
 „ W. H., 172  
 WOODALL, J. W., 86  
 Woodend, 44  
 Woodhead, Map, 502

- WOODHEAD, T. W., 363, 367, 421, 456, 476  
 Woodhouse, Map, 502  
 Woodlesford, 427, 470  
 Woodnook, British Dagger, 91  
*Woodocrinus*, 88  
 „ *expansus*, 105  
 „ *macrodactylus*, 80, 193, 407  
 WOODRUFFE, PEACOCK, E. A., 410  
 WOODS, HENRY, 245, 261, 290, 319, 340, 349, 358, 367, 375, 386, 397, 405, 421, 422, 446, 456, 465  
 WOODWARD, A. SMITH, 193, 200, 227, 235, 237, 245, 261, 270, 280, 290, 300, 310, 318, 319, 326, 330, 340, 363, 367, 405, 446, 460  
 „ H., 106, 110, 115, 123, 127, 142, 146, 151, 156, 181, 187, 206, 208, 270, 300, 305, 310, 314, 319, 340, 349, 358, 363, 367, 398, 421, 465  
 „ HORACE B., 146, 194, 209, 219, 268, 270, 290, 310, 330, 340, 349, 367, 398, 434, 446, 462, 465, 473, 474, 476  
 „ J., 11  
 „ S., 47  
 „ S. P., 103, 165, 166  
 Woodwardian Museum, 217, 245, 252, 259, 268, 316  
 WOOLACOTT, D., 438, 446  
 WOOLER, —, 16  
 Wooley Coal Co., Map, 488  
 „ Colliery, 291  
 WORDSWORTH, W., 63, 64, 78, 86, 91  
 Work for Field Clubs, 220  
 „ of H. C. Lewis, 227  
 „ Ice Sheets, 207  
 „ Ouse, 316, 317  
 „ Rain and Rivers, 448  
 „ Yorks. Boulder Committee, 344  
*Workshop*, 159  
 World's Coal Resources, 456  
 „ Minerals, 444  
 Worm, Fossil, 74, 75  
 „ -like Fossils, 88  
 WORRALL, JOHN, xxxiii.  
 Worsborough Collieries, 164  
 Wortley Boring, Map, 490  
 „ Boulders in Coal, 203, 212  
 „ Hippopotamus, 104  
 „ Map, 490, 502  
 Wressle, Map, 500
- WRIGHT, J., 280  
 „ FLORENCE B., 465  
 „ G. FREDERICK, 227, 237, 248, 251, 254, 258, 261, 447  
 „ G. P., 246  
 „ T., 13, 74, 76, 84, 87, 89, 91, 94, 96, 101, 102, 103, 104, 110, 113, 123, 127, 156, 160, 166, 172, 177, 181, 187, 201  
 „ WILLIAM, 435  
 „ W. B., 447, 470, 476  
 WRIGLEY, AMMON, 447  
 WROOT, H. E., 398, 405  
 Wrose Brow, Peat, 430  
 „ Hill, 188  
 Wycliffe, Map, 492  
 Wykeham, 337  
 „ High Moor, Map, 493  
 Wyre Forest, 272  
*Xenacanthus*, 163  
*Xenophyton radiculosum*, 348  
 Xerophytic Characters of Coal Plants 392  
 YAPP, R. H., 398  
 Yarm, Map, 492  
 Yarra, 396  
 „ Coal-Balls, 388  
 YATES, J., 72  
 Yeadon, 253, 255  
 Yedingham, Map, 495  
 Yedmandale, Boulders, 346  
 „ Formation of, 81  
 „ Rhomb-Porphry, 328  
 „ Valley in, 74  
 Yellow Boulder Clay, Airedale, 322, 400  
 „ Clay, Airedale, 415  
 „ Bradford, 436  
 YEO, J. B., 172, 194, 237  
 „ T. B., 367  
 YOKOYAMA, M., 227  
 Yore Valley, History of, 83  
 „ Scenery, 299  
 Yoredales, 204, 332  
 „ Age of, 343  
 „ and Pendlesides, 439  
 „ Calder Valley, 318  
 „ Changes in, 257  
 „ Chert, 137  
 „ Commercial Products, 363  
 „ *Cydonocrinus*, 457  
 „ *Deltodus*, 330  
 „ Derbyshire, 366  
 „ Fishes, 135, 183, 339  
 „ Fossils, 285, 318  
 „ Invertebrate Tracks, 193  
 „ Labyrinthodonts, 183  
 „ Limits of, 140

- Yoredales, Marsden, 285  
 " Memoir, 118  
 " Nodules, 354  
 " Ostracoda, 276  
 " Phosphatic, Nodules in, 345  
 " Polyzoa, 200  
 " Position of, 295  
 " Saddleworth, 285  
 " Succession, 338  
 " Teesdale, 343  
 " the Term, 366  
 " Wensleydale, 135, 136  
 York, 2, 3, 4, 7, 15, 17, 19, 21, 27, 30,  
 34, 46, 169, 246, 268, 341, 359,  
 373, 374, 375, 378, 380, 381, 436  
 York, xxxiv., 9, 34, 259, 270, 271, 275,  
 280, 316, 341, 382  
 " and Hull, Geology of, 196  
 " Bear's Bone, 167  
 " Books, xxxiv.  
 " Boulders, 251, 255, 256, 296, 299  
 " Dale, 239, 247, 253  
 " Excursions, 78  
 " Fever at, 188  
 " Glacials, 289  
 " History, 436  
 " Map, 478, 481, 498  
 " Moraines, 270, 286, 324  
 " Museum, 68, 80, 244, 262, 264, 267  
 407  
 " " Handbook, 169  
 " Press, Memoir of, xxxiv.  
 " Sanitary District, 260  
 " Stone, 435  
 " Vale of, 352, 362  
 " Water, 148, 174  
 " " Analyses, 188  
 " 'Yorkshire,' 378  
 " and Scandinavia, Connexion,  
 234  
 " *Archæological Journal*, 114,  
 119, 395, 423  
 " Bibliography, xxxi.  
 " Book About, 400  
 " Boulder Committee, 201,  
 202, 209, 210, 220, 247,  
 249, 253, 260, 269, 279,  
 299, 305, 315, 324, 334,  
 344, 353, 372, 406  
 " Boulder Committee: A Re-  
 trospect, 346  
 " Boulders, 210, 323, 324, 332,  
 401  
 " Building Stones, 144  
 " by Pen and Picture, 474  
 " Calamitæ, 249  
 " Carboniferous Flora, 233,  
 286  
 " Caves, 182, 250, 302, 312,  
 387, 463  
 " Chalk, 349  
 Yorkshire, Claypits, 331  
 " Coal Plants, 243  
 " Coalfield, Address on, 165  
 " " Extension of, 381  
 " " Fossil Flora, 296  
 " " Geological dia-  
 gram, 476  
 " " Geology of, 154,  
 235  
 " " Map, 466  
 " " Memoir, 118  
 " " Section of, 58, 59,  
 476  
 " Coalfields, 55, 70, 246, 261,  
 271, 284, 291, 299, 300,  
 322, 344, 381, 400, 420,  
 438, 440, 460  
 " Coast, 251  
 " " and Moorland, 362  
 " " Boulders, 265, 461  
 " " Later Periods, 82  
 " " Lost Towns, 463, 465  
 " " Simpson on, 115  
 " " Sketch, 94, 96  
 " Coiners, 383  
 " Concealed Coalfields, 372,  
 456  
 " Cretaceous Lamellibranchi-  
 ata, 458  
 " Dales, 161, 173, 320  
 " " and Fells, 380  
 " " Visit to, 178  
 " Drifts, 422, 466  
 " " Reade on, 180  
 " Earthquakes, 185, 369, 373,  
 398  
 " Echinoids, 452  
 " Erratics (*see* Boulders)  
 " Flagstones, 89, 310  
 " Fossil Flora Committee, 258,  
 306, 413  
 " " Plants, 442  
 " Fossils, Index of, 426  
 " *Gazette*, 38  
 " Geological Photographs,  
 Committee, 419  
 " " Society, History  
 of, 223  
 " Geology of, xxix., 161, 168  
 " " History of, 215  
 " " Hughes on, 114  
 " " Kendall on, 392,  
 394  
 " " Phillips on, 141  
 " " Pioneers, 329  
 " " Progress in, 451  
 " Glacial Committee, 406  
 " " Beds, 142, 143, 167,  
 173, 283, 426  
 " Glaciation of, 266, 267  
 " Glacier Lakes, 349

- Yorkshire Herald*, 219  
 Yorkshire History, 123, 322, 333, 352,  
     361  
     History, Fletcher, 313  
     Jurassic Flora, 442  
     Lake Dwellings, 384  
     Lakes, Origin of, 471  
     Lead Mining, 376  
     Lias, 127, 128, 146, 300  
     Library, xxxii., 192  
     Lost Towns, 449, 454, 457  
     Meteorite, 438  
     Moor, 307, 316  
     Moors and Dales, 446  
     Natural History 200 Years  
         Ago, 473  
     Naturalists' Club, 110  
     *Naturalists' Record*, 129  
     Naturalists' Union, 173, 182,  
         186, 188, 194, 201, 209,  
         210, 220, 221, 222, 228,  
         229, 230, 232, 237, 238,  
         239, 240, 241, 242, 248,  
         249, 253, 255, 262, 265,  
         268, 271, 273, 279, 280,  
         282, 286, 309, 326, 333,  
         335, 337, 342, 346, 347,  
         349, 352, 355, 361, 362,  
         364, 365, 368, 374, 377,  
         379, 380, 384, 388, 389,  
         392, 394, 395, 405, 406,  
         409, 411, 412, 413, 414,  
         415, 416, 417, 418, 419,  
         421, 425, 427, 428, 430,  
         432, 442, 444, 450, 460,  
         462, 466, 472, 476  
     Naturalists' Union, History  
         of, 472  
     Notes and Queries, 201, 215,  
         228, 384, 394, 403  
     *Observer*, 406  
     Oolites, 135, 154, 313, 453  
     "    Hudleston on, 179  
     "    Map, 491  
     Palæontology of, 393, 394  
     Past and Present, 123, 130  
         454  
     Petrology, 235, 450  
     Philosophical Society, 68  
     *Post*, 227, 228, 230, 231, 232,  
         233, 235, 249  
     Pot Holes, 312  
     Quarries, 144  
     *Ramblers' Club Journal*, 311,  
         312, 321, 322, 333, 348,  
         351, 352, 354, 367, 368,  
         369, 409, 415, 416, 424,  
         426, 427, 431, 436, 438,  
         442, 458, 462  
     Sandstones, 358, 367, 382  
     Scenes, etc., 218  
  
 Yorkshire Spaw, 3  
     Stone, 227, 465  
     Strata, Section, 391  
     Vales and Wolds, 401  
     *Weekly Post*, 232, 242, 247,  
         254, 255, 326  
     Well Sections, 300  
     Wells, 144  
 Yorkshire's Contribution to Science,  
     xxxiii.  
 Youle, 9  
 Youlthorpe, Boulders, 210  
 YOUNG, A., 17, 18  
     GEORGE, 33, 34, 35, 37, 38, 39,  
         40, 41, 44, 50, 54, 56, 60,  
         113  
     GEO. W., 435  
     J., 111, 113  
  
*Zamia gigas*, History of, 122  
     Runswick, 72, 111  
*Zamites cf buchianus*, 414  
     *gigas*, 307  
     *gigas*, restoration, 83  
*Zaphrentis Omalioni*, 399  
*Zeacrinus calyx*, 79  
 Zechsteinformation, 95  
*Zeitschr., Min.*, 41  
*Zeitschrift für Gletscherkunde*, 492  
 Zig-Zag Ramblings, 306, 315  
     "    "    Manson, 185  
     "    "    of a Naturalist,  
         297  
 Zinc, 28  
     "    in Cleveland, 102  
     Ore, 27, 131  
 ZITTEL, KARL A. VON, 459, 465  
 Zone, *Capricornis*, 304  
     *Jamesoni*, 304  
     Spongiarian, Danes' Dyke, 296  
 Zones, Carboniferous, 274, 281, 283,  
     285, 287, 294, 303, 305, 313,  
     322, 323, 334, 344, 352, 361,  
     371, 380, 391, 392, 401, 424  
     Carboniferous, Limestone, 455  
     Chalk, 257, 276, 277, 355, 364,  
         377, 381, 404  
     Graptolitic, 434  
     Molluscan, Carboniferous, 380  
     Speeton, 301  
     "    Cliffs, 277  
     Lias, Correlation, 156, 160  
 Zone of *Avicula contorta*, 94  
     *Belemnitella plena*, 337  
*Zoological Journ.*, 41  
 Zoological Position of *Petalorhynchus*,  
     173  
*Zoological Record*, 311, 320  
 Zoophytes, Chalk, 57, 72  
 Zymologia Physica, 7,

PRINTED AT BROWNS' SAVILE PRESS,  
SAVILE STREET AND GEORGE STREET, HULL.



PROCEEDINGS OF THE YORKSHIRE GEOLOGICAL SOCIETY  
VOL. XVIII.

# BIBLIOGRAPHY OF YORKSHIRE GEOLOGY

(C. FOX-STRANGWAYS' MEMORIAL VOLUME)

BY  
**T. SHEPPARD**  
M.Sc., F.G.S., F.R.G.S., F.S.A.(Scot.)  
THE MUSEUMS, HULL

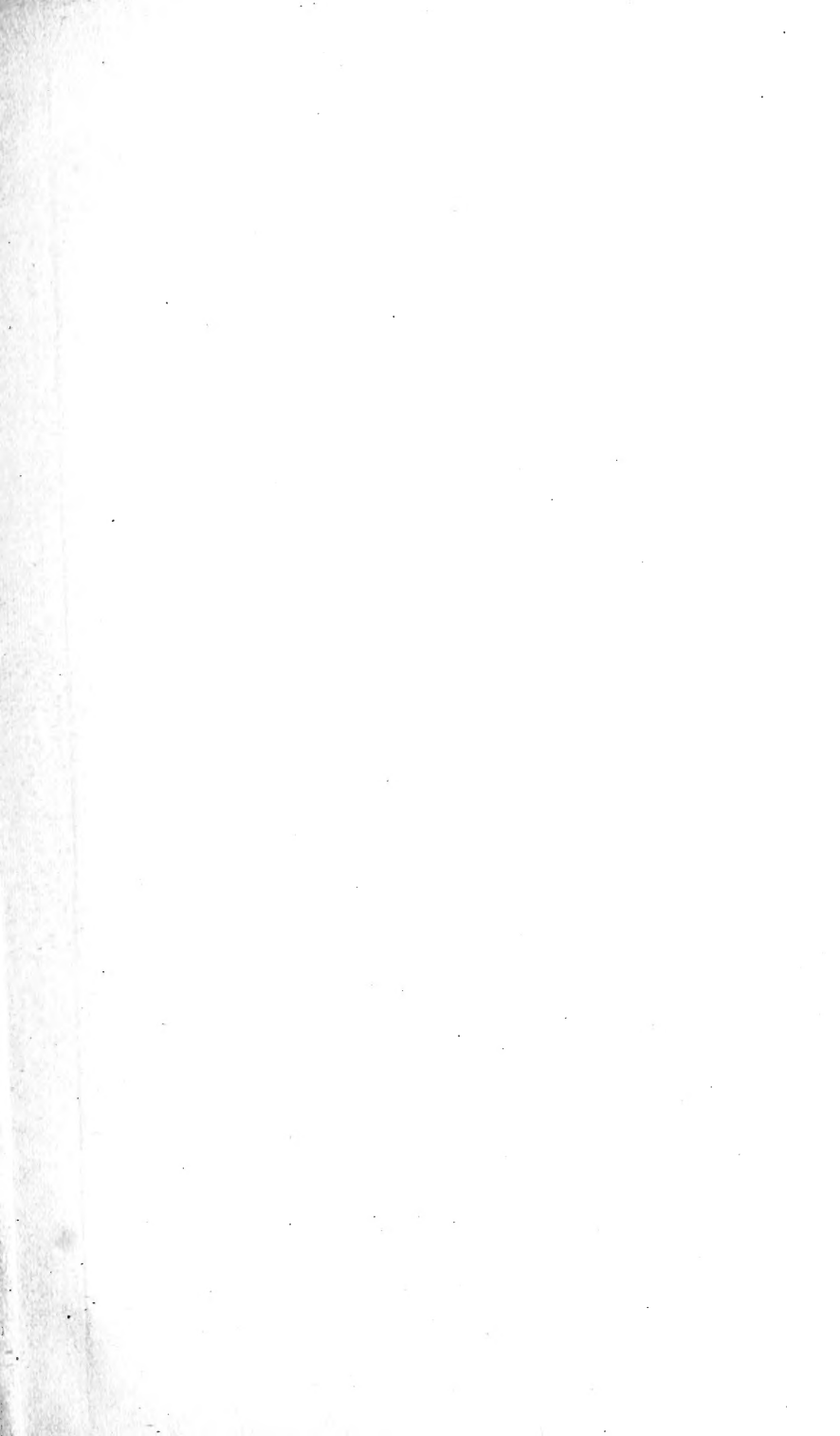
**PRICE 15/- NET**

(Free to Members)

A. BROWN & SONS, LIMITED  
LONDON, HULL AND YORK

1915





AMNH LIBRARY



100218638